

INDIAN HEALTH SERVICE

TRENDS IN INDIAN HEALTH—1994

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PREFACE

Since 1955, the U.S. Public Health Service, through its Indian Health Service (IHS) component, has had the responsibility for providing comprehensive health services to American Indian and Alaska Native people in order to elevate their health status to the highest possible level. The mission of the IHS is to provide a comprehensive health services delivery system for American Indians and Alaska Natives with opportunity for maximum tribal involvement in developing and managing programs to meet their health needs.

This publication presents tables and charts that describe the IHS program, and the health status of American Indians and Alaska Natives. Information pertaining to the IHS structure, American Indian and Alaska Native demography, patient care, and community health are included. Current and trend information are presented, and comparisons with other population groups are made, when appropriate.



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OVERVIEW OF THE INDIAN HEALTH SERVICE PROGRAM

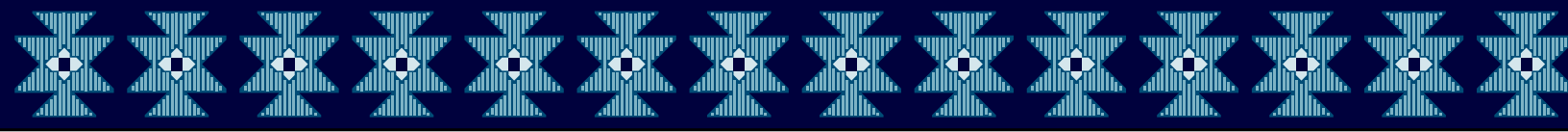
The Department of Health and Human Services (DHHS), primarily through the Indian Health Service (IHS) of the Public Health Service (PHS), is responsible for providing Federal health services to American Indians and Alaska Natives. Federal Indian health services are based on the laws that the Congress has passed pursuant to its authority to regulate commerce with the Indian Nations as explicitly specified in the Constitution and in other pertinent authorities.

The Indian Health program became a primary responsibility of the PHS under P.L. 83-568, the Transfer Act, on August 5, 1954. This Act provides “that all functions, responsibilities, authorities, and duties . . . relating to the maintenance and operation of hospital and health facilities for Indians, and the conservation of Indian health . . . shall be administered by the Surgeon General of the United States Public Health Service.”

The IHS goal is to raise the health status of American Indians and Alaska Natives to the highest possible level. The mission is to provide a comprehensive health services delivery system for American Indians and Alaska Natives with opportunity for maximum tribal involvement in developing and managing programs to meet their needs. The IHS also acts as the principal Federal health advocate for Indian people by ensuring they have knowledge of and access to all Federal, State, and local health programs they are entitled to as American citizens. It is also the responsibility of the IHS to work with these programs so they will be cognizant of entitlements of Indian people.

The IHS has carried out its responsibilities through developing and operating a health services delivery system designed to provide a broad-spectrum program of preventive, curative, rehabilitative, and environmental services. This system integrates health services delivered directly through IHS facilities and staff on the one hand, with those purchased by IHS through contractual arrangements on the other, taking into account other health resources to which the Indians have access. Tribes are also actively involved in program implementation.

The 1975 Indian Self-Determination Act, P.L. 93-638 as amended, builds upon IHS policy by giving Tribes the option of manning and managing IHS programs in their communities, and provides for funding for improvement of Tribal capability to contract under the Act. The 1976 Indian Health Care Improvement Act, P.L. 94-437, as amended, was intended to elevate the health status of American Indians and Alaska Natives to a level equal to that of the general population through a program of authorized higher resource levels in the IHS budget. Appropriated resources were used to expand health services, build and renovate medical facilities, and step up the construction of safe drinking water and sanitary disposal facilities. It also established programs designed to increase the number of Indian health professionals for Indian needs and to improve health care access for Indian people living in urban areas.



The operation of the IHS health services delivery system is managed through local administrative units called service units. A service unit is the basic health organization for a geographic area served by the IHS program, just as a county or city health department is the basic health organization in a State health department. These are defined areas, usually centered around a single federal reservation in the continental United States, or a population concentration in Alaska.

A few service units cover a number of small reservations; some large reservations are divided into a number of service units. The service units are grouped into larger cultural-demographic-geographic management jurisdictions, which are administered by Area Offices.



PURPOSE AND DESCRIPTION OF TRENDS IN INDIAN HEALTH

The *IHS Trends in Indian Health* attempts to fulfill the basic statistical information requirements of parties that are interested in the IHS, and its relationship with the American Indian and Alaska Native people. The tables and charts contained in the *IHS Trends in Indian Health* describe the IHS program, and the health status of American Indians and Alaska Natives.

Information pertaining to the IHS structure, American Indian and Alaska Native demography, patient care, and community health are included. Historical trends are depicted, and comparisons to other population groups are made, when appropriate. Current regional differences information can be found in the IHS companion publication called *Regional Differences in Indian Health*.

The tables and charts are grouped into six major categories: 1) IHS Structure, 2) Population Statistics, 3) Natality and Infant/Maternal Mortality Statistics, 4) General Mortality Statistics, 5) Patient Care Statistics, and 6) Community Health Statistics. The tables provide detailed data, while the charts show significant relationships. A table and its corresponding chart appear next to each other. However, some charts that are self-explanatory do not have a corresponding table. Also, a few tables have more than one chart associated with them.



SUMMARY OF DATA SHOWN

Indian Health Service Structure

The IHS is comprised of 11 regional administrative units called Area Offices. There is also an Office located in Tucson that is responsible for administering health services delivery. For the present statistical purposes, the Tucson Office is also considered an Area Office, thereby making 12 in total. As of October 1, 1993, the Area Offices consisted of 143 basic administrative units called service units. Of the 143 service units, 70 were operated by Tribes. The IHS operated 41 hospitals, 66 health centers, 4 school health centers, and 44 health stations; while Tribes operated 8 hospitals, 110 health centers, 4 school health centers, 62 health stations, and 171 Alaska Village Clinics. There were 34 Urban Projects ranging from information referral and community health services to comprehensive primary health care services.

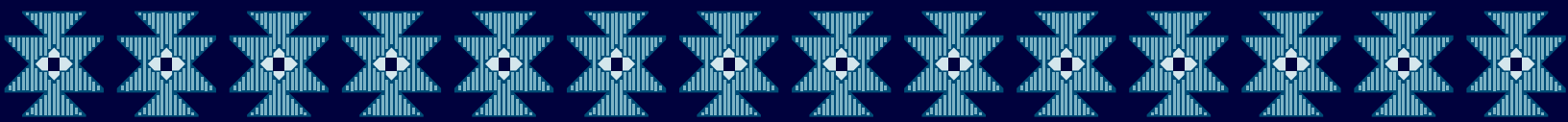
As of January 1, 1994, all IHS and Tribally-operated hospitals and eligible IHS-operated health centers were accredited by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO). Since 1990, 5 of 8 (63 percent) of the Regional Youth Treatment Centers have become accredited by JCAHO. The remaining 3 are preparing for accreditation. IHS proficiency testing rating exceeded the requirements of the Clinical Laboratory Improvement Amendments of 1988 (CLIA '88) for all private and public sector laboratories. Overall proficiency rating for IHS laboratories is 97 percent. CLIA '88 requires 80 percent proficiency for most analytes. In FY 1993, there were nearly 10.7 million pharmacy workload units in IHS and Tribal direct facilities. Over 69 percent of these were associated with outpatient care.

Population Statistics

In Fiscal Year 1995, the IHS service population (count of those American Indians and Alaska Natives who are eligible for IHS services) will be approximately 1.37 million. The IHS service population is increasing at a rate of about 2.2 percent per year, excluding the impact of new Tribes. The Indian population residing in the IHS service area is younger than the U.S. All Races population, based on the 1990 Census. For Indians, 34 percent of the population was younger than 15 years, and 6 percent was older than 64 years. For the U.S. All Races population, the corresponding values were 22 and 13 percent respectively. The Indian median age was 24.2 years compared with 32.9 years for U.S. All Races. According to the 1990 Census, Indians have lower incomes than the general population. In 1989, Indians residing in the current Reservation States had a median household income of \$19,886 compared with \$30,056 for the U.S. All Races population. During this time period, 31.6 percent of Indians lived below the poverty level in contrast to 13.1 percent for the U.S. All Races population.

Natality and Infant/Maternal Mortality Statistics

The birth rate for American Indians and Alaska Natives residing in the IHS service area was 28.1 (rate per 1,000 population) in 1989-1991. It is 68 percent greater than the 1990 birth rate of 16.7 for the U.S. All Races population. The maternal mortality rate for American Indians and Alaska Natives residing in the IHS service area dropped from 27.7



(rate per 100,000 live births) in 1972-1974 to 9.8 in 1989-1991, a decrease of 65 percent. During 1989-1991, there were only 10 Indian maternal deaths. The infant mortality rate for American Indians and Alaska Natives residing in the IHS service area dropped from 22.2 (rate per 1,000 live births) in 1972-1974 to 10.2 in 1989-1991, a decrease of 54 percent. The U.S. All Races rate for 1990 was 9.2.

General Mortality Statistics

The leading cause of death for American Indians and Alaska Natives residing in the IHS service area (1989-1991) was “diseases of the heart” followed by “accidents.” However, the cause of death rankings differ by sex. For Indian males, the top two causes were also “diseases of the heart” and “accidents.” For Indian females, the top two causes were “diseases of the heart” and “malignant neoplasms” (the same as for the total U.S. All Races population in 1990).

In 1989-1991, the Indian (IHS service area) age-adjusted mortality rates for the following causes were considerably higher than those for the U.S. All Races population:

- 1) tuberculosis - 440 percent greater,
- 2) alcoholism - 430 percent greater,
- 3) accidents - 165 percent greater,
- 4) diabetes mellitus - 154 percent greater,
- 5) homicide - 50 percent greater,
- 6) pneumonia and influenza - 46 percent greater, and
- 7) suicide - 43 percent greater.

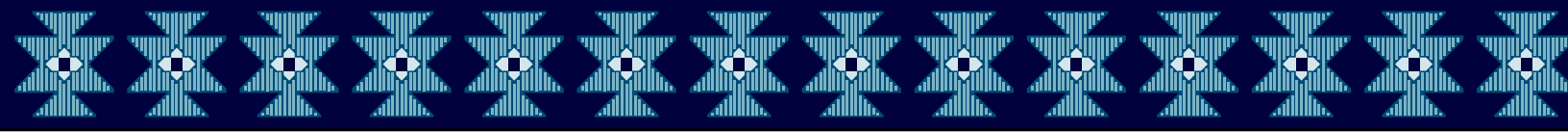
Patient Care Statistics

In FY 1992, there were over 93,000 admissions to IHS and Tribal direct and contract general hospitals. The leading cause of hospitalization was “obstetric deliveries and complications of puerperium and pregnancy.” The total number of outpatient visits (IHS and Tribal direct and contract facilities) was approximately 5.7 million in FY 1992, an increase of nearly 1,150 percent since FY 1955. The leading cause of outpatient visits in IHS and Tribal direct and contract facilities was “supplemental classification.” The “supplemental classification” category includes such clinical impressions as “other preventive health services,” “well child care,” “physical examination,” “tests only” (lab, x-ray, screening), and “hospital, medical, or surgical follow-up.” The number of direct and contract dental services provided (IHS, Tribal, and Urban) increased nearly 1,400 percent (from under 0.2 million in FY 1955 to nearly 2.7 million in FY 1993).

Community Health Statistics

For people accepted for treatment into the IHS substance abuse treatment program, most initial contacts are for alcohol addiction only. However, the number of initial contacts involving other drugs has been increasing. Also, the age-adjusted drug-related death rate for Indians residing in the IHS service area increased from 3.4 deaths per 100,000 population in 1979-1981 to 4.3 in 1989-1991. The U.S. All Races rate for 1990 was 3.5.

The IHS Injury Prevention (IP) program has a wide variety of projects in place in all IHS Areas to address this major health problem. Exemplary projects are: child passenger



protection, roadway/roadside hazard identification, safety belt use promotion, deterring drinking and driving, drowning prevention, smoke detector usage, helmet use, and injury prevention campaign. There were nearly 4 times as many injury prevention services provided in FY 1993 compared with FY 1987, 70,619 versus 18,920.

The nutrition and dietetics program made over 381,000 patient/client contacts during FY 1993. The majority of the contacts were in the community (40 percent) and the hospital (38 percent). Over half (56 percent) of the contacts were for clinical nutrition counseling and over one-third (36 percent) were for health promotion. Of the clinical nutrition counseling contacts, the majority were for general nutrition (39 percent) and diabetes (26 percent) nutrition counseling. Ongoing counseling accounted for 57 percent of the encounters, first visits and follow-up accounted for 29 percent of the encounters, and series of classes accounted for 14 percent of the encounters.

There were approximately 250,000 public health nursing visits recorded in the Headquarters reports for FY 1993. This is a large increase in nursing visits from the number reported for FY 1992 (157,000) in last year's edition of this publication. This and other data issues are discussed in the "Sources and Limitations of Data" section that follows. The most frequent program areas dealt with during these visits were morbidity (30 percent of the visits), health promotion/disease prevention (23 percent), and child health (12 percent). Female visits outnumbered male visits by nearly 70 percent. The visits were concentrated in two age groups, children under 5 years of age (22 percent) and adults over the age of 64 (20 percent).

The community health representative (CHR) program made over 4.1 million client contacts in FY 1993. Most of these contacts took place in the community (41 percent), followed by home (26 percent). The two leading detailed activities for CHR contacts in FY 1993 were health education (23 percent) and case management (17 percent).

Since 1960, over 196,000 Indian homes were funded by IHS for the provision of sanitation facilities. These services included water and sewerage facilities, solid waste disposal systems and technical assistance to establish and equip operation and maintenance organizations for new, rehabilitated, and existing homes. Contributions to IHS sanitation facilities projects are received from numerous sources. In FY 1993, Tribes were the largest contributors to these cooperative projects.

The FY 1994 sanitation deficiencies to serve existing American Indian and Alaska Native homes and communities totals \$609 million. This amount is to provide first service sanitation facilities, to upgrade existing facilities, to provide solid waste facilities, and to provide assistance to operation and maintenance organizations.



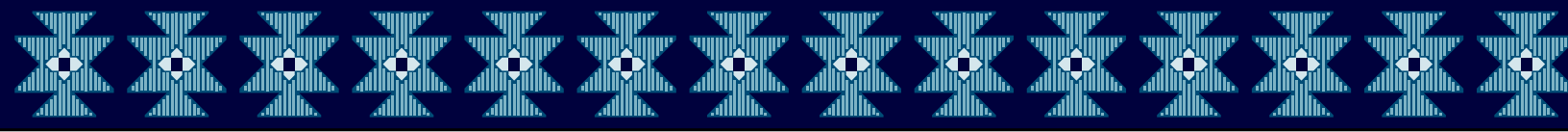
SOURCES AND LIMITATIONS OF DATA

Population Statistics

The IHS service population consists of American Indians and Alaska Natives identified to be eligible for IHS services. IHS service population estimates are based on official U.S. Census Bureau county data. The Census Bureau enumerates those individuals who identify themselves as being American Indian, Eskimo, or Aleut. The IHS service population is estimated by counting those American Indians, Eskimos, and Aleuts (as identified during the Census) who reside in the geographic areas in which IHS has responsibilities (“on or near” reservations, i.e., contract health service delivery areas (CHSDAs)). These people may or may not use IHS services.

The IHS service population estimates, which are shown in this publication, need to be contrasted to the IHS user population estimates that are shown in the *Regional Differences in Indian Health* publication. IHS user population estimates are based on data from the IHS Patient Registration System. Patients who receive direct or contract health services from IHS or Tribally-operated programs are registered in the Patient Registration System. Those registered Indian patients that had at least one direct or contract inpatient stay or outpatient visit or a direct dental visit during the last 3 years are defined as users. IHS user population figures are used for calculating IHS patient care rates. In contrast, IHS service population figures are used in calculating Indian vital event rates since State birth and death certificates do not provide information on use of IHS services.

IHS service populations between Census years (e.g., 1980 and 1990) are estimated by a smoothing technique in order to show a gradual transition between Census years. This normally results in upward revisions to service population figures projected prior to a Census, since each Census tends to do a better job in enumerating American Indians and Alaska Natives. For example, the American Indian and Alaska Native service population enumerated in 1990 was approximately 8 percent higher than that estimated by IHS for 1989. Therefore, after release of the 1990 enumeration figures, IHS smoothed the service population estimates for 1981-1989. That set of smoothed populations was used in the 1992 edition of this series. Subsequently, the Census Bureau issued revised 1990 Census American Indian and Alaska Native population counts by age and sex for all U.S. counties. They resulted in a 3.9 percent increase for the 1990 IHS service population using these “new” 1990 Census counts compared to the “old” 1990 Census counts. In order to adjust for this 1990 increase, IHS again smoothed the service populations for 1981-1989. This second set of smoothed populations was used in the 1993 edition of the series. The Census Bureau recently issued revised 1980 Census American Indian and Alaska Native population counts by age and sex for all U.S. counties, as was done for 1990. They resulted in a 2.8 percent increase for the 1980 IHS service population using these “new” 1980 Census counts compared with the “old” 1980 Census counts. In order to adjust for this 1980 increase, IHS has for a third time smoothed the service populations for 1981- 1989. This third set of smoothed populations is being used for the first time in this edition of the series.



IHS service populations beyond the latest Census year (1990) are projected through linear regression techniques, using the most current 10 years of Indian birth and death data provided by the National Center for Health Statistics. The natural change (estimated number of births minus estimated number of deaths) is applied to the latest Census enumeration.

The IHS does not currently forecast changes in the service population distribution by age and sex. Rather, appropriate Indian age and sex distributions from Census years are applied to population estimates for intercensal years.

The social and economic data contained in this publication are from the 1990 Census. At the time of this publication, IHS had not yet obtained county-level social and economic data. Therefore, State-level data were used to develop estimates for the IHS service area. That is, Indian data for each of the States where IHS currently has responsibilities (Reservation States) were combined to form an estimate for the entire IHS service area. IHS has made arrangements with the Census Bureau to obtain county-level social and economic data for Indians which will allow IHS to make more precise calculations for the IHS service area.

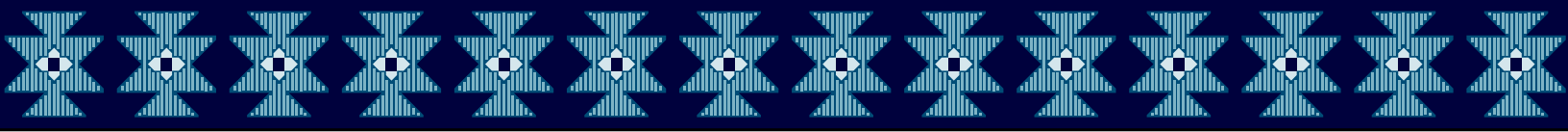
Vital Event Statistics

American Indian and Alaska Native vital event statistics are derived from data furnished annually to the IHS by the National Center for Health Statistics (NCHS). Vital event statistics for the U.S. population were derived from data appearing in various NCHS publications, as well as from some unpublished data from NCHS. NCHS obtains birth and death records for all U.S. residents from the State departments of health, based on information reported on official State birth and death certificates. The records NCHS provides IHS contain the same basic demographic items as the vital event records maintained by NCHS for all U.S. residents, but with names, addresses, and record identification numbers deleted. It should be noted that Tribal identity is not recorded on these records. Tabulations of vital events for this publication are by place of residence.

The data are subject to the degree of accuracy of reporting by the States to NCHS. NCHS does perform numerous edit checks, and imputes values for non-responses. IHS is using the National Death Index (NDI) maintained by NCHS to determine the extent of the underreporting of Indian race on death certificates. The results of the NDI match should indicate in which States the problems are occurring. IHS will then target the “problem” States for special efforts aimed at the improvement of the reporting of race.

It is already known that there is underreporting of Indian race on State death certificates in the California, Oklahoma, and Portland Areas. In the *Regional Differences in Indian Health* publication, which shows Area-specific indices, adjustments are made for these Areas. Since this publication only shows IHS-aggregate mortality-based indices (i.e., mortality rates, years of productive life lost, and life expectancy at birth), no adjustments are made. Therefore, these IHS-aggregate mortality-based indices should be considered conservative estimates of the true values. However, the trends are essentially the same with and without adjustments for underreporting of Indian race on death certificates.

The vital event statistics in this publication pertain to only American Indians and Alaska Natives residing in the IHS service area. Editions of this publication before 1992 showed



vital event statistics calculated on a Reservation State basis. Therefore, data were included for Indians residing outside the geographic areas for which IHS has responsibility. This was done in order to show trends starting in FY 1955, to correspond with the inception of the Indian Health Service (IHS) program. Prior to 1972, only total Reservation State data are available.

Now that there are sufficient vital event data available for the IHS service area to show meaningful trends, this publication shows vital event statistics for the IHS service population, starting with data for calendar year 1972. IHS service area data are more indicative of the health status of the Indians that IHS serves. Reservation State vital event rates tend to be lower in value (i.e., lower birth rates, lower mortality rates) than IHS service area rates. However, the vital event tables in this publication will still include the 1955 Reservation State figure as an historical bench mark.

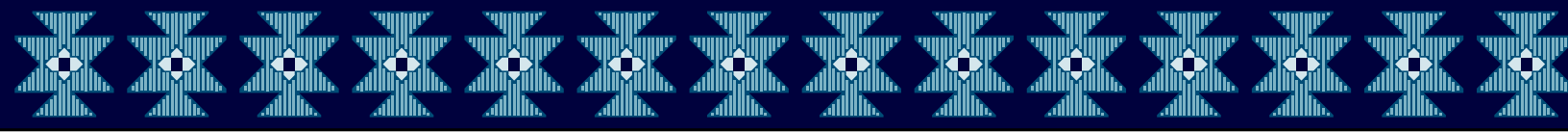
Population-based Indian rates cited in this publication that involve the years 1981-1989 are different than those provided in prior editions in this series. The population estimates for the years 1981-1989 were revised upward by IHS for a third time, as a result of Census Bureau adjustments of 1980 Indian population counts by age and sex. This is explained in the previous discussion pertaining to "population statistics." Increased population bases resulted in the calculation of lower rates for these years.

Normally, each edition of this publication includes only one year of new vital event data. However, this year the timing was such that two years of data (1990 and 1991) could be added.

The Indian population is considerably younger than the U.S. All Races population. Therefore, the mortality rates presented in this publication have been age-adjusted, where applicable, so that appropriate comparisons can be made between these population groups. One exception is the information presented for leading causes of death. In order to determine the leading causes of death for a population group, it is necessary to rank causes of death without any adjustment for age. However, it should be kept in mind that the ranking of causes of death for a population group is affected by its age composition.

The age-adjusted mortality rates presented in this publication were computed by the direct method, that is, by applying the age-specific death rate for a given cause of death to the standard population distributed by age. The total population as enumerated in 1940 was selected as the standard since this is the standard used by NCHS. The rates for the total population and for each race-sex group were adjusted separately, by using the same standard population. The age-adjusted rates were based on 10-year age groups. It is important not to compare age-adjusted death rates with crude rates.

Prior to the 1993 edition of this publication, alcoholism deaths were defined through the use of three ICD-9 cause of death code groups; 291-alcoholic psychoses; 303-alcohol dependence syndrome; and 571.0-571.3-alcoholic liver disease. Various IHS Area statisticians and epidemiologists believed this definition to be incomplete and suggested that it be expanded to include five additional ICD-9 code categories. These "new" categories were used for the first time in the 1993 edition. They include; 305.0-alcohol overdose; 425.5-alcoholic cardiomyopathy; 535.3-alcoholic gastritis; 790.3-elevated blood-alcohol level; and E860.0, E860.1-accidental poisoning by alcohol, not elsewhere



classified. This expanded definition results in about a 25 percent increase in the number of alcoholism deaths identified in comparison with the previous 3-group definition. This expanded definition of alcoholism deaths is now used in all IHS publications, including *Regional Differences in Indian Health*.

There is also a change in this edition regarding the treatment of deaths related to injuries and poisonings. In prior editions, mortality data were shown separately for three of the causes (i.e., accidents, suicide, and homicide) that comprise the injuries and poisonings group. Commencing with this edition, mortality data are now also shown for the composite group, “deaths due to injury and poisoning” (ICD-9 codes E800-E999) and the other causes that comprise this composite group. The same treatment is also now used in the companion document, *Regional Differences in Indian Health*. The following titles and codes are used for this purpose.

- (new) Deaths due to injury and poisoning (E800-E-999)
 - Accidental Deaths (E800-E949)
 - Motor vehicle accidents (E810-E825)
 - Other accidents (E800-E807, E826-E949)
 - Suicide (E950-E959)
 - Homicide (E960-E978)
- (new) Injury undetermined whether accidentally or purposely inflicted (E980-E989)
- (new) Injury resulting from operations of war (E990-E999)

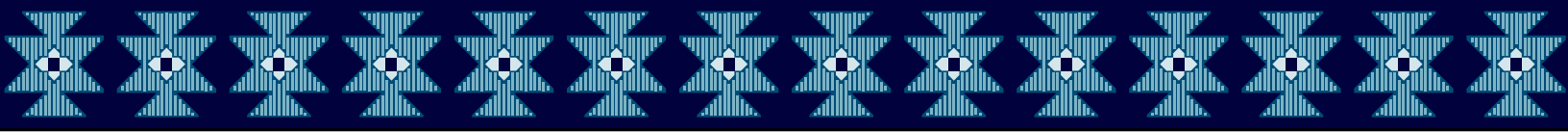
Patient Care Statistics

Patient care statistics are derived from IHS reporting systems. There are four main patient care reporting systems. The Monthly Inpatient Services Report is a patient census report that is prepared by each IHS hospital. It indicates the number of discharges and days by type of service (e.g., adult, pediatric, obstetric, newborn), and is used for the direct inpatient workload statistics. The Inpatient Care System is the source of IHS hospital inpatient data pertaining to various patient characteristics (age, sex, principal diagnoses, other diagnoses, community of residence, etc.). The data are collected daily, one record per discharge. The Contract Care System is the source of similar contract hospital inpatient data.

The Ambulatory Patient Care System is the source of data pertaining to the number of outpatient visits at IHS facilities by various patient characteristics (age, sex, clinical impression, community of residence, etc.). The data are collected daily, one record per outpatient visit. The Contract Care System is the source of similar contract outpatient visit data.

The data from the automated systems are subject to recording, inputting, and transmitting errors. However, the IHS Division of Program Statistics monitors the reporting systems, and each one has a computer edit. In these ways, errors are kept to an acceptable level.

There are seven other information systems that provide data, presented in this report, pertaining to patient care. The Clinical Laboratory Workload Reporting System is the source of laboratory services data. The Pharmacy System is the source of pharmacy workload data. The PHS Contract Information System and PHS Grants Data System are the sources for Tribal health contract and grant awards information. The Urban Projects Reporting System is the source for workload data for the Urban Projects. The Dental Data



System is the source for dental services data. The Fluoridation Data System, managed by the IHS Dental Services Branch, is the source for fluoridation systems information. The Pharmacy System and Urban Projects Reporting System are manual systems, the others are automated. The systems are monitored by IHS Headquarters personnel.

Community Health Statistics

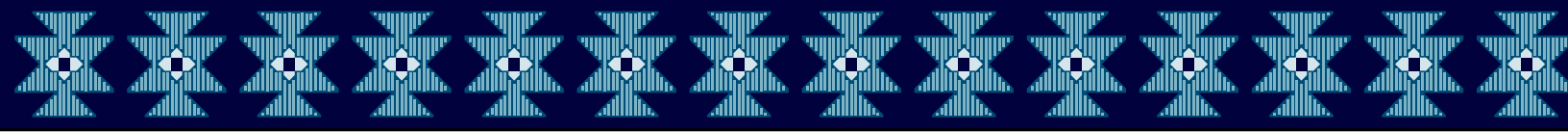
The source of alcoholism and substance abuse program data is the Chemical Dependency Management Information System (CDMIS). This is an automated system, with computer edits, that is monitored by IHS Headquarters personnel. The CDMIS is currently being implemented as a replacement for the Alcoholism Treatment and Guidance System. During this transition period, the program data are considered incomplete and are therefore not shown in this edition.

The environmental health services data are collected through the Environmental Health Activity Reporting and Facility Data System (EHAR & FDS). This is a microcomputer based system that combines two previously separate data collection systems. The EHAR section of this system is used for the environmental health activity data. The system is decentralized to the Area level providing maximum flexibility for Area environmental health programs. IHS Headquarters personnel monitor the overall quality of the data.

The nutrition and dietetics statistics are derived from the IHS Nutrition and Dietetics Program Activity Reporting System (NDPARS). This is an automated system, with computer edits, that is monitored by IHS Headquarters personnel.

The public health nursing data are collected through the IHS Community Health Activity Reporting System. This is an automated system, with computer edits, that is monitored by IHS Headquarters personnel. The number of public health nursing visits reported in this edition for FY 1993 is considerably higher than the number reported for FY 1992 in last year's edition. There are two main reasons for this. Many public health nursing programs are now utilizing the Patient Care Component (PCC) to collect data. Until recently, it was not possible to merge this PCC-collected data with data collected in the old way. Now, the merging of these data has been at least partially accomplished. Also, the FY 1993 workload counts included some FY 1992 workload that had been delayed. Although the workload reported for FY 1993 is much greater than the FY 1992 figures, the hours reported is less. The current version of the PCC form does not provide for the capture of hours worked, thereby resulting in an underreporting of hours for the program. There are plans to modify the PCC form to remedy this.

For FY 1993, data on the IHS Community Health Representatives (CHR) Program were obtained from the IHS Community Health Representative Information System (CHRIS II). CHRIS II is an automated reporting system that is monitored by IHS CHR Program Headquarters personnel. This system was approved by the Office of Management and Budget on March 31, 1989, and has been operational since July 10, 1989. Data are collected during one week randomly selected from each month. At the start of FY 1992 minor changes in the CHRIS II activity code categories were implemented. Primarily, the service codes were simplified by consolidating administrative functions. This change improved the data quality by greatly reducing the incidence of inaccurately reported persons served when administrative functions were performed by CHRs. In addition, the setting category, "radio/telephone," was added to allow the reporting of CHR services



provided to individuals via these media. Health area category names were changed only to add greater specificity and clarity to the activity reporting system and its data (e.g., “substance abuse” was changed to “alcohol/substance abuse”). Data presented encompass 12 sample reporting weeks from October 1992 through September 1993. These data have been expanded to represent estimated workload for a 12-month period.

The sanitation facilities statistics are derived from IHS reporting systems and financial systems. The IHS reporting systems are the Project Data System and the Sanitation Facility Data System. The Project Data System is the source of detailed data on P.L.86-121 construction projects that provide water supplies and sewerage and waste disposal facilities to American Indians and Alaska Natives. It includes such data as community name, type and number of homes provided with services, the funds allocated and funds expended, completion dates, and accomplishments. Data are collected quarterly. The Sanitation Facility Data System is the source of additional data on sanitation facilities serving American Indians and Alaska Natives. It includes such data as the number of homes served, water rates, fluoridation information, Safe Drinking Water Act Compliance, system reliability, and the unmet need for new or upgraded facilities. Data are collected annually. The systems are monitored by IHS Headquarters personnel.



GLOSSARY

Age Adjustment

The application of the age-specific rates in a population of interest to a standardized age distribution in order to eliminate the differences in observed rates that result from age differences in population composition. This adjustment is usually done when comparing two or more populations at one point in time or one population at two or more points in time.

Area

A defined geographic region for Indian Health Service (IHS) administrative purposes. Each Area Office administers several service units.

Average Daily Patient Load

The average number of patients occupying beds in a hospital on a daily basis. It is calculated by dividing total inpatient days for the year by 365.

Birth Weight

Weight of fetus or infant at time of delivery (recorded in pounds and ounces or grams).

Cause of Death

For the purpose of national mortality statistics, every death is attributed to one underlying condition, based on information reported on the death certificate and utilizing the international rules for selecting the underlying cause of death from the reported conditions.

Community Health Representative (CHR)

Indians selected, employed, and supervised by their Tribes and trained by IHS to provide specific health care services at the community level.

Contract Care

Services not available directly from IHS or Tribes that are purchased under contract from community hospitals and practitioners.

Health Center

A facility, physically separated from a hospital, with a full range of ambulatory services, including at least primary care physicians, nursing, pharmacy, laboratory, and x-ray, that are available at least 40 hours a week for outpatient care.



Health Station

A facility, physically separated from a hospital or health center, where primary care physician services are available on a regularly scheduled basis but for less than 40 hours a week.

Infant Mortality

Death of live-born children who have not reached their first birthday expressed as a rate (i.e., the number of infant deaths during a year per 1,000 live births reported in the year).

Life Expectancy

The average number of years of life remaining to a person at a particular age and is based on a given set of age-specific death rates, generally the mortality conditions existing in the period mentioned.

Live Birth

A live birth is the complete expulsion or extraction from its mother of a product of conception irrespective of the duration of pregnancy, which after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

Low Birth Weight

Birth weight of less than five pounds, eight ounces or 2500 grams.

Neonatal Mortality Rate

The number of deaths under 28 days of age per 1,000 live births.

Occurrence

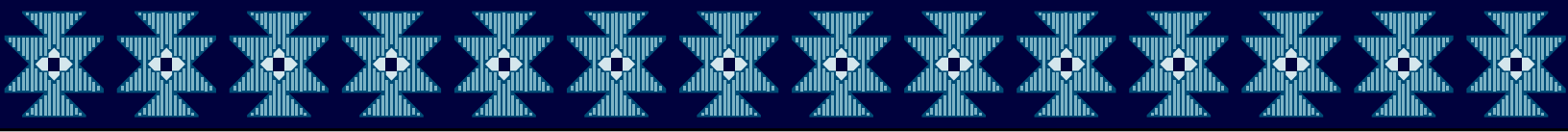
Place where the event occurred.

Postneonatal Mortality Rate

The number of deaths that occur from 28 days to 365 days after birth per 1,000 live births.

Race

On death certificates, race is usually recorded by the funeral director who may or not query the family members of the decedent. The race of a newborn does not appear on the birth certificate. In this report if either the mother, the father, or both parents were recorded as American Indian or Alaska Native on the birth certificate, the birth is considered as an American Indian or Alaska Native birth.

**Reservation State**

A State in which IHS has responsibilities for providing health care to American Indians or Alaska Natives.

Residence

Usual place of residence of person to whom event occurred. For births and deaths, residence is defined as the mother's place of residence.

Service Area

The geographic areas in which IHS has responsibilities — “on or near” reservations, i.e., contract health service delivery areas.

Service Population

American Indians and Alaska Natives identified to be eligible for IHS services.

Service Unit

The local administrative unit of IHS.

User Population

American Indians and Alaska Natives eligible for IHS services who have used those services at least once during the last 3-year period.

Years of Productive Life Lost (YPLL)

A mortality indicator that measures the burden of premature deaths. It is calculated by subtracting the age at death from age 65 and summing the result over all deaths.



SOURCES OF ADDITIONAL INFORMATION

Additional Indian health status information can be obtained from the IHS Division of Program Statistics. Specific responsibilities are as follows:

General Information

Anthony J. D'Angelo, Director, Division of Program Statistics

Demographic Statistics

Aaron O. Handler, Chief, Demographic Statistics Branch

Linda J. Querec, Statistician

JoAnn N. Pappalardo, Computer Systems Analyst

Barbara A. Moore, Statistical Assistant

Patient Care Statistics

Stephen F. Kaufman, Chief, Patient Care Statistics Branch

Marilyn J. Tulsa, Statistician

Bonnie M. Matheson, Computer Assistant

Copies of this and other Division publications may be obtained from Priscilla Sandoval or Monique E. Alston, Division Secretaries.

The Division address and phone number are as follows:

Indian Health Service

Office of Planning, Evaluation, and Legislation

Division of Program Statistics

Twinbrook Metro Plaza

12300 Twinbrook Parkway, Suite 450

Rockville, Maryland 20852

Phone: 301-443-1180

Fax: 301-443-1522

PART I – INDIAN HEALTH SERVICE STRUCTURE

Chart 1.1

Indian Health Service

The Indian Health Service is composed of 12 regional administrative units called Area Offices. Some of the health programs are operated by Tribes, and there are a limited number of projects to serve Indians living in urban areas.

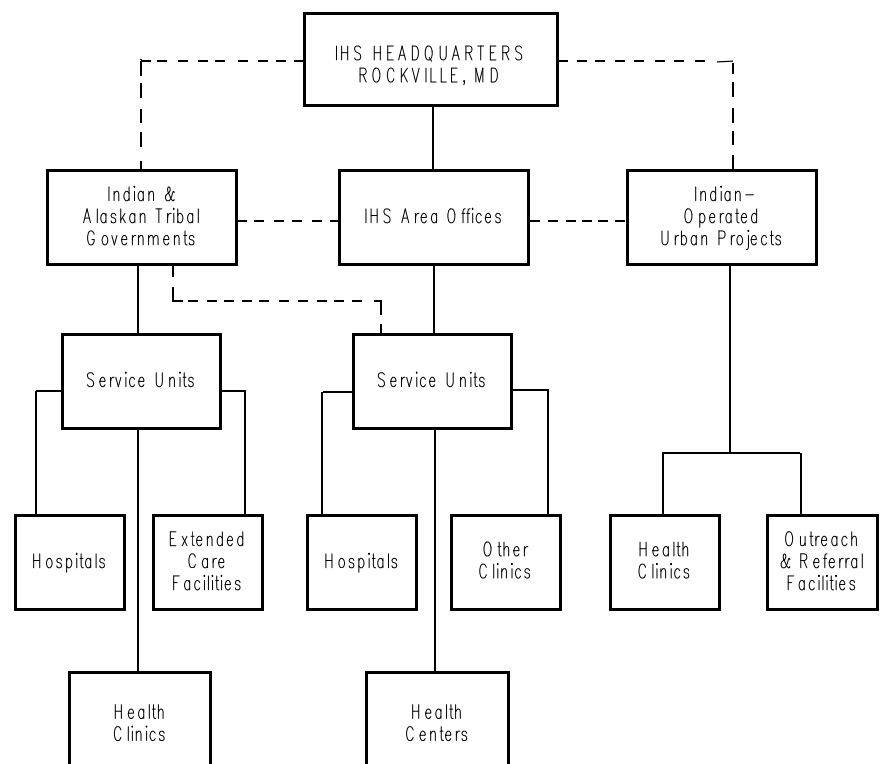


Chart 1.2

Indian Health Service Area Offices

There were 73 Indian Health Service-operated service units that administered 41 hospitals and 114 health centers, school health centers, and health stations as of October 1, 1993.

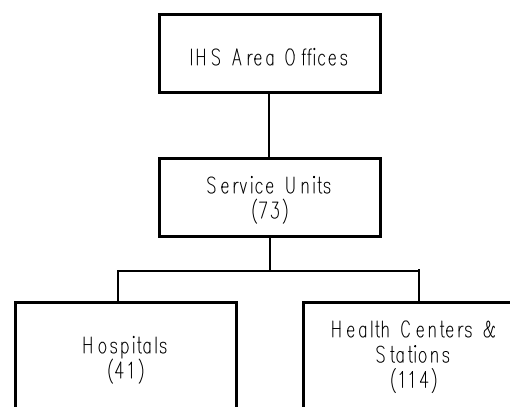


Chart 1.3

Indian and Alaska Native Tribal Governments

There were 70 Tribally-operated service units that administered 8 hospitals and 347 health centers, school health centers, health stations, and Alaska village clinics as of October 1, 1993.

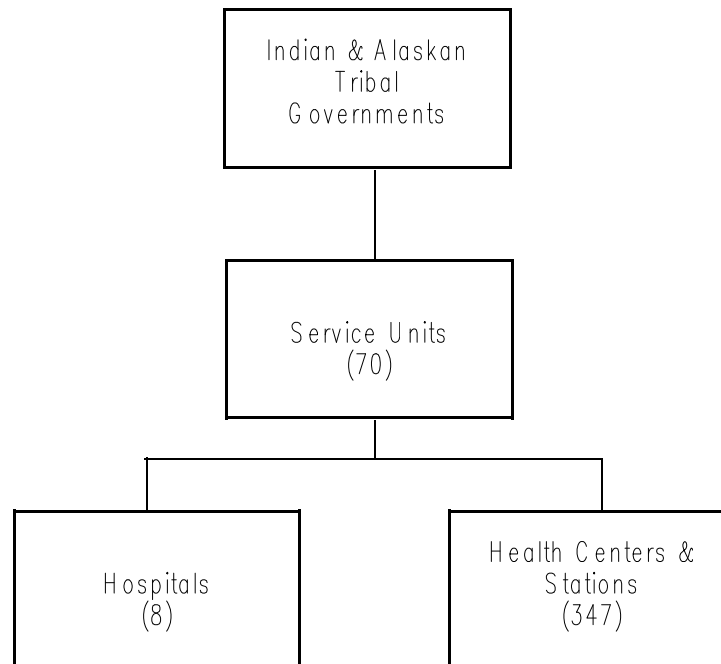


Chart 1.4

Indian-Operated Urban Projects

There were 34 Indian-operated Urban Projects as of October 1, 1993. The Urban programs range from information referral and community health services to comprehensive primary health care services.

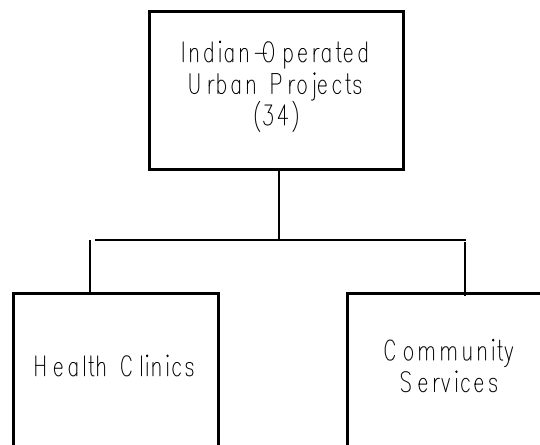


Chart 1.5

***Number of Facilities
Operated by Indian
Health Service and Tribes
as of October 1, 1993***

Indian Health Service operated 114 outpatient facilities consisting of 66 health centers, 4 school health centers, and 44 health stations as of October 1, 1993. Tribes operated 347 outpatient facilities consisting of 110 health centers, 4 school health centers, 62 health stations, and 171 Alaska village clinics as of October 1, 1993.

Type of Facility	IHS	Tribal
Hospitals	41	8
Outpatient Facilities	114	347
. Health Centers	66	110
. School Health Centers	4	4
. Health Stations	44	62
. Alaska Village Clinics	.	171

Chart 1.6

***Trend in Indian Health
Service Budget***

The Indian Health Service budget (appropriations and collections) has increased 136 percent from FY 1985 to FY 1994. However, in constant 1993 dollars, the budget has only increased 27 percent.

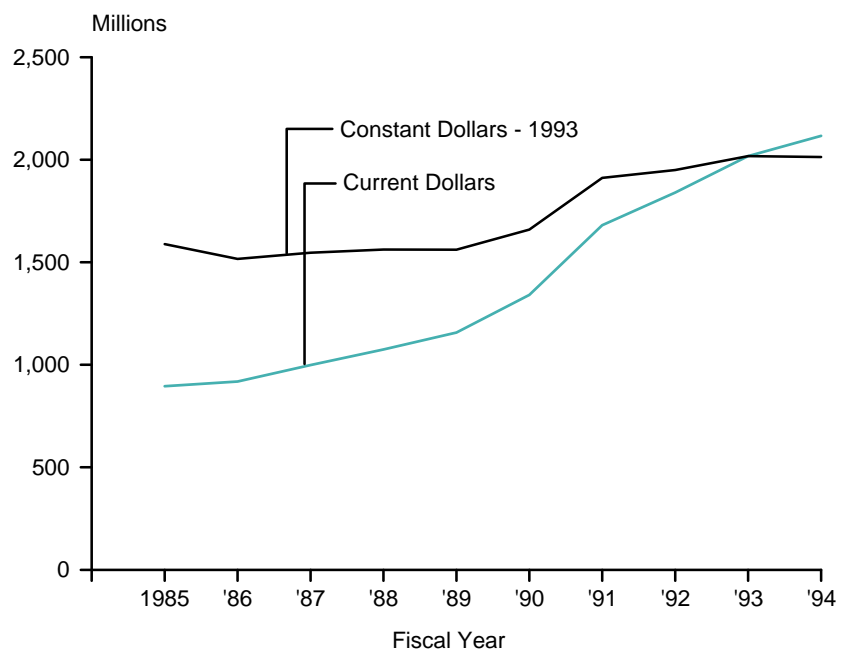


Table 1.6
Trend in Indian Health Service Budget

(Dollars in Thousands)

Category	FY 1985	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990	FY 1991	FY 1992	FY 1993	FY 1994
Clinical Services	655,499	702,485	747,526	816,729	883,088	1,031,072	1,235,481	1,276,185	1,251,660	1,325,462
Preventive Health Services	65,744	65,871	66,331	70,110	73,471	77,630	89,978	64,951	70,011	74,464
Other Services										
Urban Health	9,800	9,644	9,000	9,624	9,962	13,049	15,687	17,195	20,965	22,834
Indian Health Professions	6,499	6,395	7,018	7,646	8,115	9,540	13,380	19,205	26,092	27,406
Tribal Management	2,450	2,645	2,709	3,094	3,218	2,562	4,235	5,038	5,161	5,285
Direct Operations	60,575	33,939	37,111	39,104	42,471	44,484	52,406	49,029	48,659	49,471
Self Governance	1,884	4,980
Contract Support Cost	100,558	136,186
Sub-Total Other	<u>79,324</u>	<u>52,623</u>	<u>55,838</u>	<u>59,468</u>	<u>63,766</u>	<u>69,635</u>	<u>85,708</u>	<u>90,467</u>	<u>203,319</u>	<u>246,162</u>
Total Services	800,567	820,979	869,695	946,307	1,020,325	1,178,337	1,411,167	1,431,603	1,524,990	1,646,088
Facilities	<u>61,634</u>	<u>46,198</u>	<u>71,055</u>	<u>62,511</u>	<u>61,668</u>	<u>71,633</u>	<u>166,402</u>	<u>274,351</u>	<u>333,640</u>	<u>296,982</u>
TOTAL SERVICES & FACILITIES ¹	862,201	867,177	940,750	1,008,818	1,081,993	1,249,970	1,577,569	1,705,954	1,858,630	1,943,070
Medicare/Medicaid Collections	32,989	51,475	58,287	66,126	75,019	88,097	94,301	121,628	140,805	² 154,026
Private Insurance Collections	3,500	8,326	12,350	18,184	² 18,957
TOTAL IHS ³ –CURRENT \$s	895,190	918,652	999,037	1,074,944	1,157,012	1,341,567	1,680,196	1,839,932	2,017,619	2,116,053
TOTAL IHS ³ –CONSTANT \$s ⁴	1,588,469	1,516,529	1,546,549	1,562,004	1,560,765	1,659,654	1,911,816	1,949,302	2,017,619	2,013,099

¹ Total IHS appropriations.

² Estimated collections.

³ Total dollars available to spend.

⁴ Constant 1993 dollars based on consumer price index for medical care, 1985-93, and 1994 budget inflation factor of 5.1 percent.

Chart 1.7

***Accreditation Status of
Selected Health Facilities,
January 1, 1994***

As of January 1, 1994, all hospitals and eligible health centers were accredited by the Joint Commission on Accreditation of Healthcare Organizations. Since 1990, 5 of 8 Regional Youth Treatment Centers have become accredited, and the remaining 3 are preparing for accreditation.

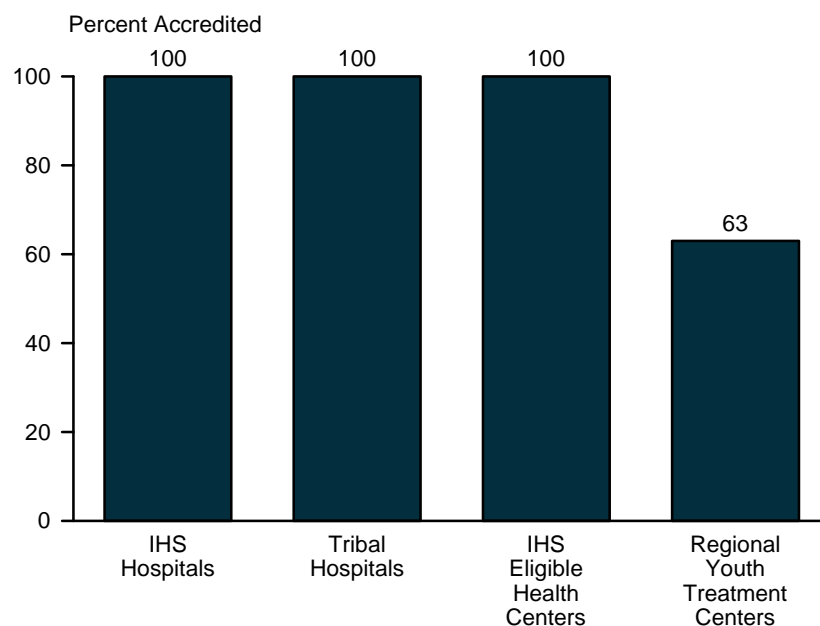


Table 1.7

***Accreditation Status of
Hospitals, Health
Centers, and Regional
Youth Treatment Centers,
January 1, 1994***

Type of Facility	Total	Accredited ¹	Not Accredited	Percent Accredited
IHS Hospitals	41	41	0	100
Tribal Hospitals	8	8	0	100
IHS Eligible Health Centers	² 57	57	0	100
Regional Youth Treatment Centers ³	8	5	3	63

¹ Accredited by the Joint Commission on the Accreditation of Healthcare Organizations.

² Excludes health centers not eligible for accreditation survey and those under Tribal management pursuant to P.L. 93-638.

³ Provide alcohol and substance abuse treatment.

Chart 1.8

Accreditation Status of Indian Health Service Laboratories

Eighty-eight percent of health center laboratories and 100 percent of hospital laboratories operated by the Indian Health Service were accredited as of January 1, 1994.

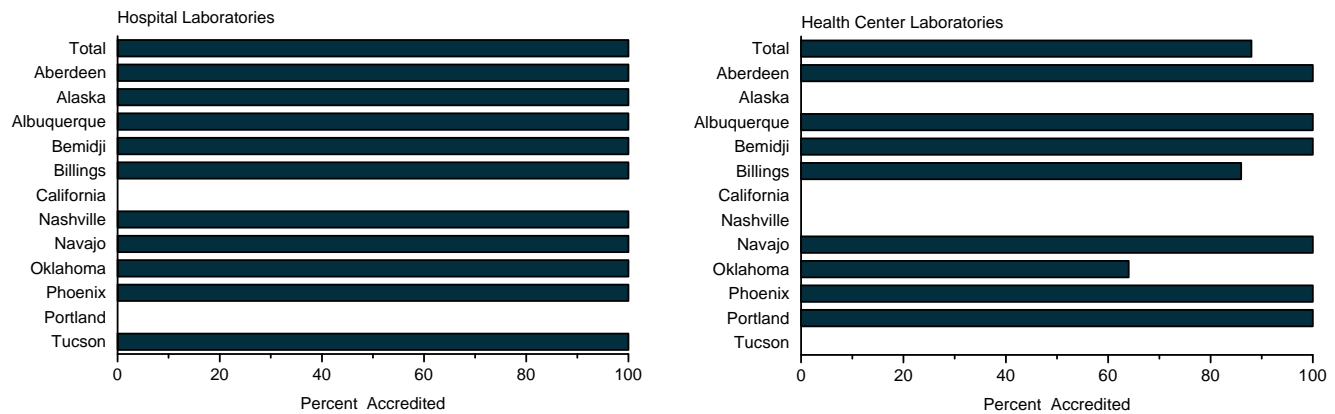


Table 1.8

Indian Health Service Laboratory Accreditation Status, January 1, 1994

Area	IHS Hospital Laboratories					IHS Health Center Laboratories				
	Total	Accred- ited ¹	Not Accredited	Percent Accredited	Percent in Proficiency Testing Program ²	Total	Accred- ited ¹	Not Accredited	Percent Accredited	Percent in Proficiency Testing Program ²
All Areas	41	41	0	100	100	48	42	6	88	100
Aberdeen	8	8	0	100	100	5	5	0	100	100
Alaska	2	2	0	100	100	.	.	.	100	100
Albuquerque	5	5	0	100	100	4	4	0	100	100
Bemidji	2	2	0	100	100	1	1	0	100	100
Billings	3	3	0	100	100	7	6	1	86	100
California	.	.	.	100	100	.	.	.	100	100
Nashville	1	1	0	100	100	.	.	.	100	100
Navajo	6	6	0	100	100	5	5	0	100	100
Oklahoma	5	5	0	100	100	11	7	4	64	100
Phoenix	8	8	0	100	100	3	3	0	100	100
Portland	.	.	.	100	100	11	11	0	100	100
Tucson	1	1	0	100	100	1	0	1	0	100

¹ Laboratories accredited by the College of American Pathologists, the Joint Commission on the Accreditation of Healthcare Organizations and the Health Care Financing Administration, DHHS. Excludes laboratories under Tribal management pursuant to P. L. 93. 638.

² Laboratories participating in the College of American Pathologists (CAP) national proficiency testing program.

Chart 1.9

**Proficiency Rating for
Indian Health Service
Laboratory Services, 1993**

Indian Health Service proficiency testing rating exceeded the requirements of the Clinical Laboratory Improvement Amendments of 1988 (CLIA '88) for all private and public sector laboratories. Overall proficiency rating for IHS laboratories is 97 percent. CLIA '88 requires 80 percent proficiency for most analytes.

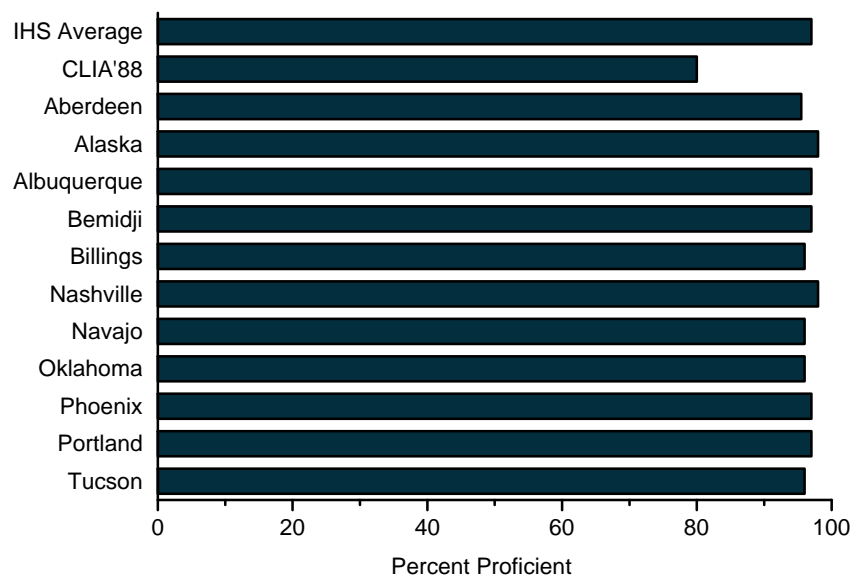


Table 1.9

**Proficiency Rating for
Indian Health Service
Laboratory Services, 1993**

Area	Percent Proficient
IHS Average	97
CLIA '88 ¹	80
Aberdeen	96
Alaska	98
Albuquerque	97
Bemidji	97
Billings	96
Nashville	98
Navajo	96
Oklahoma	96
Phoenix	97
Portland	97
Tucson	96

¹ Proficiency level required by Clinical Laboratory Improvement Amendments (CLIA) of 1988.

Chart 1.10

Trend in Pharmacy Workload by Type of Activity, Indian Health Service and Tribal Direct Facilities

Total pharmacy workload at Indian Health Service and Tribal direct facilities has increased 13 percent since FY 1989. However, between FY 1991 and FY 1993 there was a drop of 4 percent.

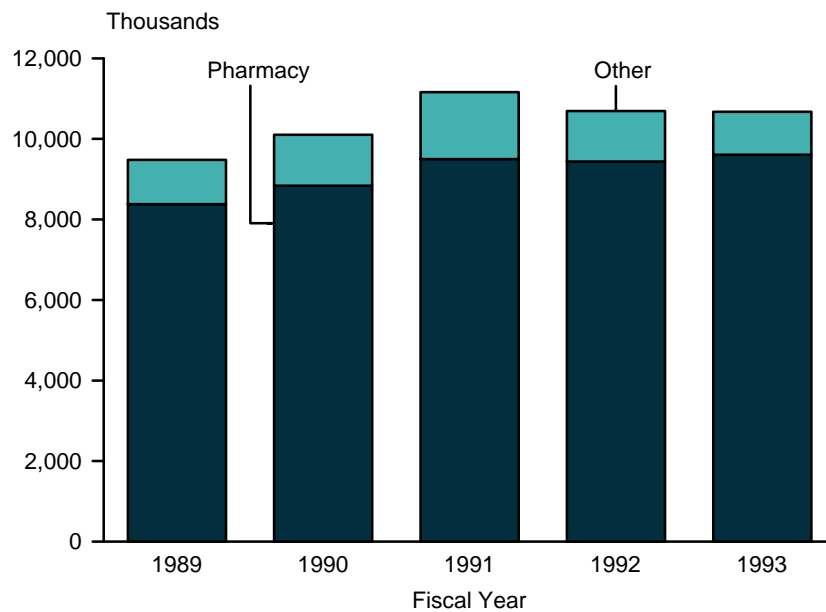


Table 1.10

Trend in Pharmacy Workload by Type of Activity, Indian Health Service and Tribal Direct Facilities

Fiscal Year	Pharmacy Activities	Other Activities	Total Workload
1993	9,607,490	1,068,821	10,676,311
1992	9,440,410	1,251,801	10,692,211
1991	9,499,145	1,665,198	11,164,343
1990	8,836,628	1,265,269	10,101,897
1989	8,380,155	1,100,747	9,480,902

Chart 1.11

Pharmacy Workload by Type of Activity, Indian Health Service and Tribal Direct Facilities, FY 1993

Sixty-nine percent of pharmacy workload at Indian Health Service and Tribal direct facilities in FY 1993 was associated with outpatient activities, followed by inpatient activities at 17 percent.

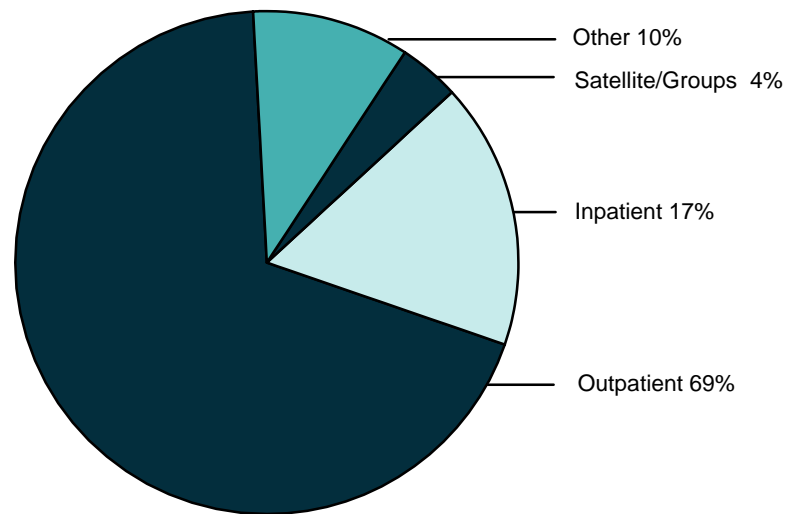


Table 1.11

Pharmacy Workload by Type of Activity, Indian Health Service and Tribal Direct Facilities, FY 1993

Type of Activity	Workload Units	Percent of Total
Total	10,676,311	100.0
Outpatient	7,381,027	69.1
Inpatient	1,806,637	16.9
Groups-Com Svc	206,620	1.9
Satellite	201,966	1.9
Groups-Counsel	11,240	0.1
Other	1,068,821	10.0

NOTE: Percentages do not sum to 100.0 due to rounding.

Chart 1.12

Outpatient Visits per Pharmacist, Indian Health Service and Tribal Direct Facilities, FY 1993

The average number of outpatient visits per pharmacist at Indian Health Service and Tribal direct facilities in FY 1993 was 11,110. There was a wide variability among the Areas, ranging from 8,300 in Alaska to 16,132 in California.

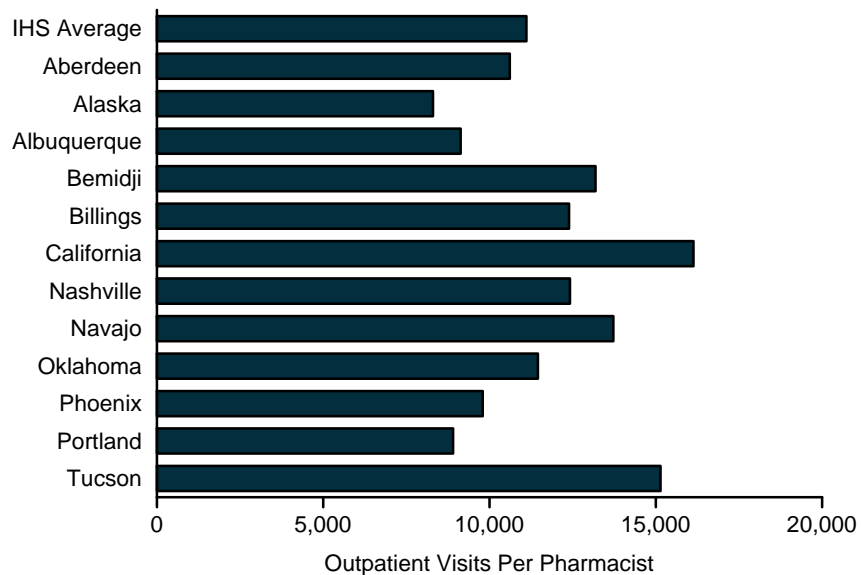


Table 1.12

Outpatient Visits per Pharmacist, Indian Health Service and Tribal Direct Facilities, FY 1993

Areas	Number of Outpatient Visits	Number of Pharmacists	Visits Per Pharmacist
All Areas	5,532,902	498	11,110
Aberdeen	572,893	54	10,609
Alaska	415,008	50	8,300
Albuquerque	374,350	41	9,130
Bemidji	382,394	29	13,186
Billings	359,272	29	12,389
California	225,853	14	16,132
Nashville	248,381	20	12,419
Navajo	850,826	62	13,723
Oklahoma	1,076,977	94	11,457
Phoenix	597,717	61	9,799
Portland	338,365	38	8,904
Tucson	90,866	6	15,144

PART 2 –POPULATION STATISTICS

Chart 2.1

Indian Health Service— Service Population

The IHS service population is increasing at a rate of about 2.2 percent per year, excluding the impact of new Tribes. It is estimated to be approximately 1.37 million in FY 1995.

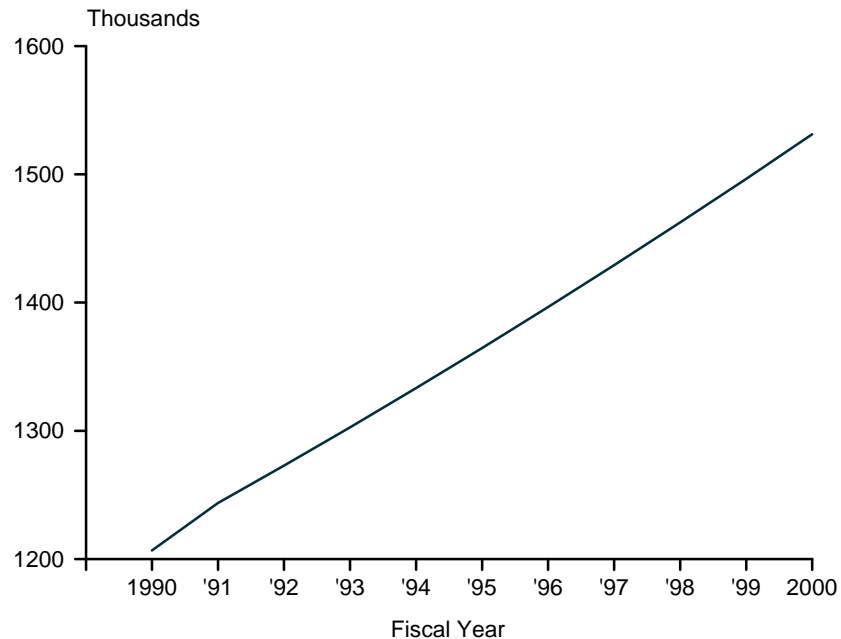


Chart 2.2

Indian Health Service—Service Population by Area

The largest percentage of the FY 1995 service population, 21, is located in the Oklahoma City Area, followed by the Navajo Area with 15. The Tucson Area has the smallest percentage, 2.

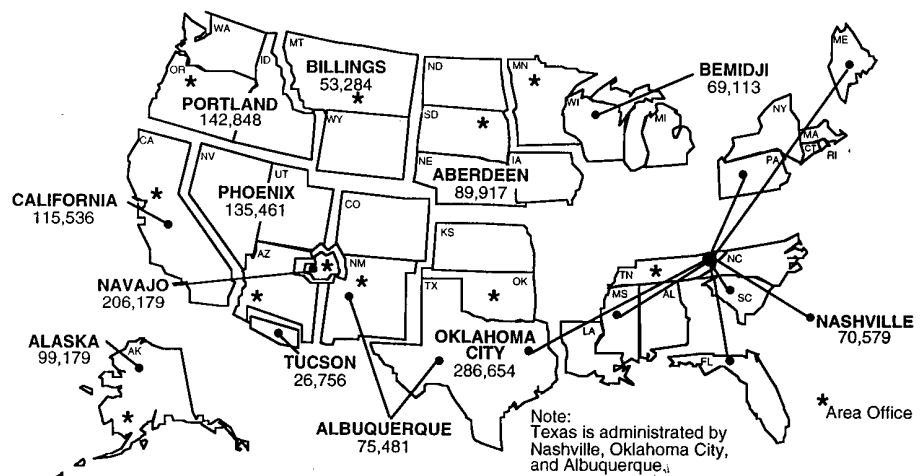


Table 2.1

IHS Service Population by Area, 1990–2000

Area	1990 (Census)	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
All Areas (Growth Factor)	1,207,236 .	1,243,383 (2.99)	1,271,361 (2.25)	1,299,807 (2.24)	1,341,395 (3.20)	1,370,987 (2.21)	1,401,035 (2.19)	1,431,566 (2.18)	1,462,578 (2.17)	1,494,053 (2.15)	1,526,003 (2.14)
Aberdeen	74,789	81,107	83,299	85,492	87,701	89,917	92,144	94,382	96,626	98,883	101,150
Alaska	86,251	88,728	91,257	93,842	96,483	99,179	101,929	104,733	107,595	110,503	113,473
Albuquerque	67,504	69,039	70,603	72,198	73,822	75,481	77,167	78,882	80,632	82,410	84,225
Bemidji	61,349	62,759	64,202	65,673	67,577	69,113	70,681	72,276	73,905	75,564	77,260
Billings	47,008	48,250	49,499	50,753	52,014	53,284	54,561	55,842	57,130	58,422	59,722
California	104,828	106,962	109,104	111,244	113,393	115,536	117,688	119,838	121,996	124,155	126,318
Nashville	48,943	54,309	55,230	56,174	69,364	70,579	71,825	73,106	74,435	75,800	77,203
Navajo	180,959	185,858	190,837	195,883	200,983	206,179	211,418	216,737	222,130	227,586	233,093
Oklahoma	262,517	267,255	272,029	276,853	281,734	286,654	291,630	296,660	301,735	306,859	312,026
Phoenix	120,707	123,597	126,554	129,134	132,288	135,461	138,711	142,040	145,440	148,918	152,473
Portland	127,774	130,485	133,284	136,668	139,712	142,848	146,092	149,447	152,896	156,458	160,128
Tucson	24,607	25,034	25,463	25,893	26,324	26,756	27,189	27,623	28,058	28,495	28,932

SOURCE: Estimated American Indian and Alaska Native service population by Area based on 1982, 1991 vital events and the 1980 and 1990 Census modified age, race, and sex files.

Chart 2.3

Population by Age and Sex, 1990 Census

The Indian male and female populations are younger than the corresponding male and female populations for the U.S. All Races.

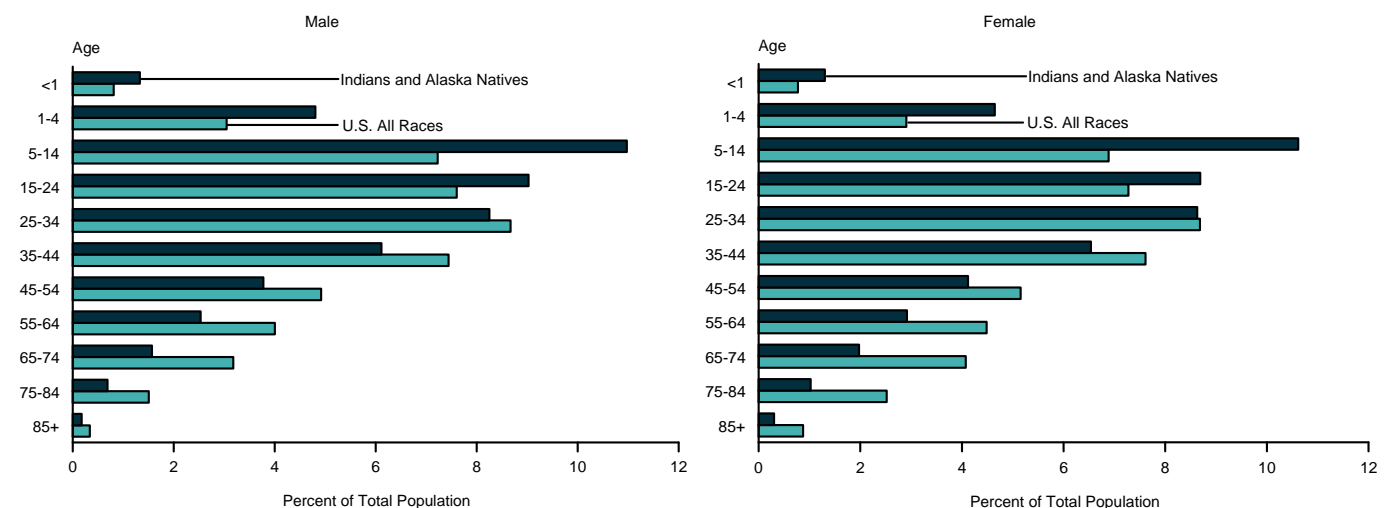


Table 2.3

Age and Sex Percent Distribution

American Indians and Alaska Natives, IHS Service Area and U.S. All Races and White Populations, 1990 Census Data

Age Group	Indian and Alaska Native, IHS Service Area ¹		U.S. All Races		U.S. White	
	Male	Female	Male	Female	Male	Female
Percent of Both Sexes:						
All Ages	49.235	50.765	48.747	51.253	48.941	51.059
Under 1 year	1.330	1.305	0.812	0.775	0.768	0.730
1-4 years	4.804	4.646	3.048	2.907	2.909	2.761
5-14 years	10.971	10.614	7.226	6.885	6.932	6.567
15-24 years	9.025	8.688	7.605	7.277	7.374	6.995
25-34 years	8.250	8.629	8.670	8.684	8.658	8.508
35-44 years	6.113	6.538	7.442	7.610	7.579	7.587
45-54 years	3.774	4.120	4.918	5.156	5.091	5.245
55-64 years	2.532	2.918	4.003	4.486	4.223	4.647
65-74 years	1.570	1.978	3.179	4.076	3.415	4.335
75-84 years	0.690	1.025	1.506	2.520	1.628	2.725
85 years and over	0.176	0.304	0.338	0.877	0.364	0.959
Percent Within Each Sex:						
All Ages	100.000	100.000	100.000	100.000	100.000	100.000
Under 1 year	2.701	2.571	1.665	1.512	1.570	1.575
1-4 years	9.758	9.153	6.253	5.673	5.944	6.168
5-14 years	22.281	20.907	14.823	13.434	14.163	18.578
15-24 years	18.330	17.114	15.602	14.198	15.066	16.940
25-34 years	16.756	16.998	17.787	16.941	17.693	12.089
35-44 years	12.417	12.880	15.267	14.847	15.487	11.369
45-54 years	7.666	8.115	10.089	10.061	10.401	11.817
55-64 years	5.142	5.748	8.211	8.753	8.628	9.726
65-74 years	3.189	3.897	6.522	7.954	6.978	6.993
75-84 years	1.402	2.019	3.089	4.917	3.326	3.767
85 years and over	0.358	0.598	0.694	1.710	0.744	0.978

¹ Based upon data from the 1990 Census modified age, race, and sex file.

Chart 2.4

Population by Age, 1990

For Indians, 34 percent of the population was younger than 15 years, and 6 percent was older than 64 years. For the U.S. All Races population, the corresponding values were 22 and 13 percent, respectively.

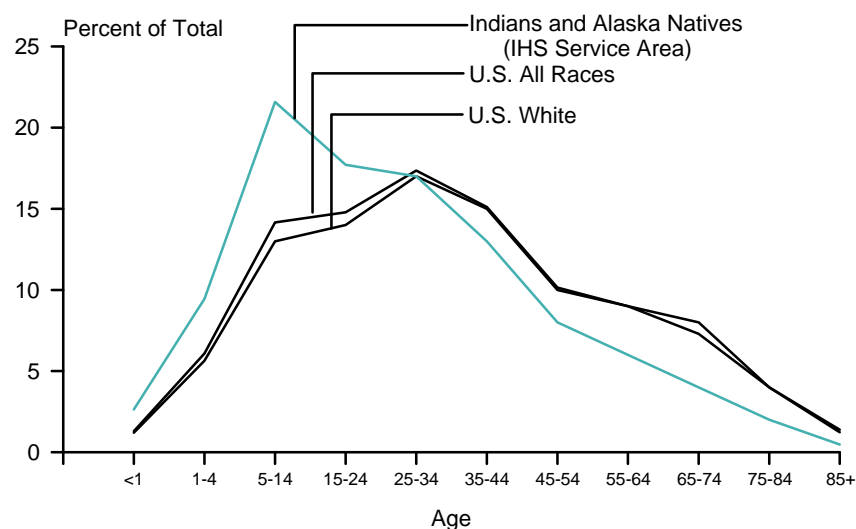


Table 2.4

Number and Percent Age Distribution

American Indians and Alaska Natives, IHS Service Area and U.S. All Races and White Populations, 1990 Census Data

Age Group	Indian and Alaska Native ¹		U.S. All Races		U.S. White	
	Number	Percent	Number	Percent	Number	Percent
All Ages	1,207,251	100.000	248,709,873	100.000	199,686,070	100.000
Under 1 years	31,813	2.635	3,217,312	1.294	2,404,258	1.204
1. 4 years	114,093	9.451	15,137,131	6.086	11,245,232	5.631
5. 9 years	136,413	11.300	18,099,179	7.277	13,616,268	6.819
10. 14 years	124,159	10.285	17,114,249	6.881	12,853,558	6.437
15. 19 years	114,248	9.463	17,754,015	7.138	13,342,703	6.682
20. 24 years	99,588	8.249	19,020,312	7.647	14,523,912	7.273
25. 29 years	105,122	8.708	21,313,045	8.569	16,638,544	8.332
30. 34 years	98,646	8.171	21,862,887	8.791	17,351,513	8.690
35. 39 years	83,894	6.949	19,963,117	8.027	16,081,606	8.053
40. 44 years	68,846	5.703	17,615,786	7.083	14,506,390	7.265
45. 49 years	52,266	4.329	13,872,573	5.578	11,585,703	5.802
50. 54 years	43,033	3.565	11,350,513	4.564	9,504,871	4.760
55. 59 years	35,783	2.964	10,531,756	4.235	8,968,416	4.491
60. 64 years	30,006	2.485	10,616,167	4.268	9,211,123	4.613
65. 69 years	25,125	2.081	10,111,735	4.066	8,899,637	4.457
70. 74 years	17,714	1.467	7,994,823	3.215	7,126,564	3.569
75. 79 years	13,210	1.094	6,121,369	2.461	5,485,025	2.747
80. 84 years	7,496	0.621	3,933,739	1.582	3,552,695	1.779
85 years and over	5,796	0.480	3,080,165	1.238	2,788,052	1.396
Median Age	24.2 years		32.9 years		34.4 years	

¹ Based upon data from the 1990 Census modified age, race, and sex file.

Chart 2.5

Educational Attainment, American Indians and U.S. All Races, 1990 Census

According to the 1990 Census, 65.3 percent of Indians aged 25 and older residing in the current Reservation States are high school graduates or higher, compared with 75.2 percent for the U.S. All Races population. For bachelor's degree or higher, these percentages are 9.0 and 20.3, respectively.

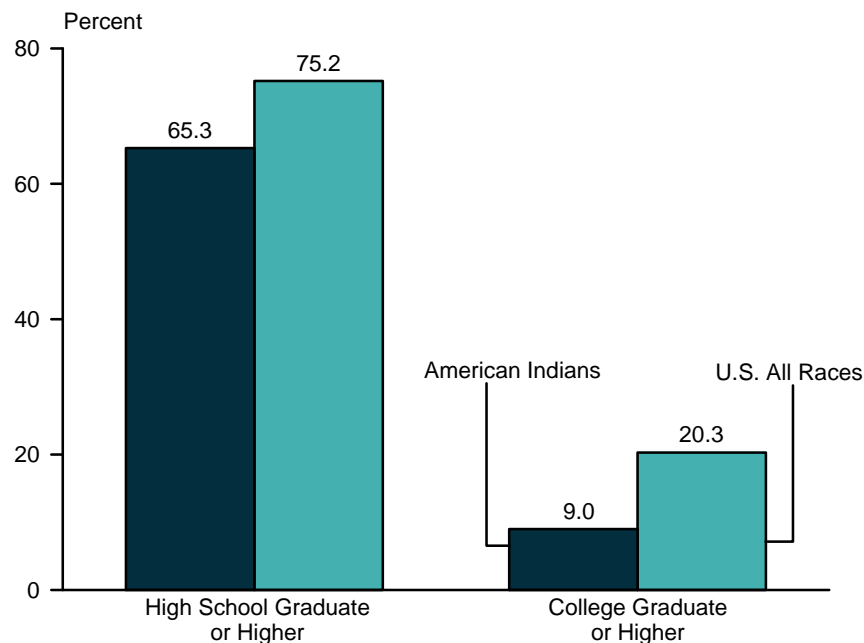


Chart 2.6

Employment Status by Sex, American Indians and U.S. All Races, 1990 Census

In 1990, 16.2 percent of Indian males aged 16 and older residing in the current Reservation States were unemployed, compared with 6.4 percent for the U.S. All Races male population. For females, these percentages were 13.5 and 6.2, respectively.

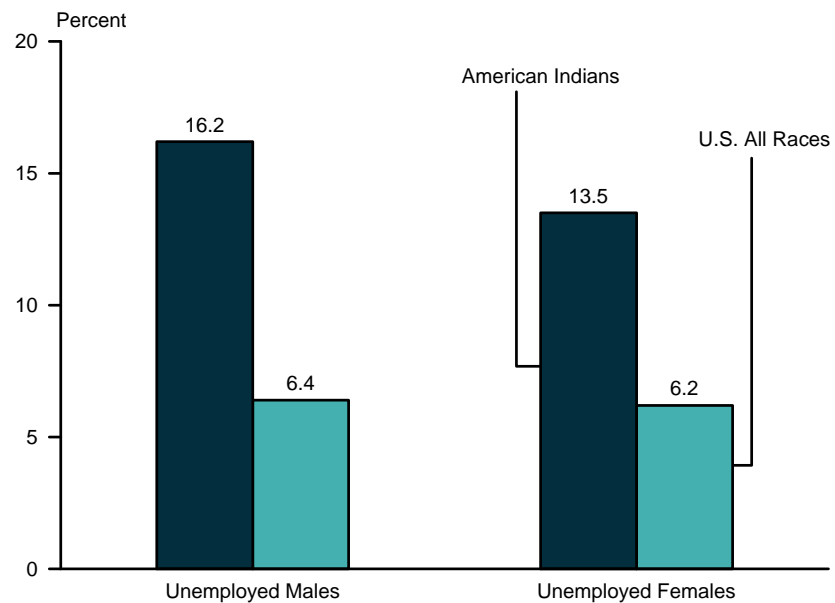


Chart 2.7

Income Status in 1989, American Indians and U.S. All Races, 1990 Census

According to the 1990 Census, the median household income in 1989 for Indians residing in the current Reservation States was \$19,886, compared with \$30,056 for the U.S. All Races population. During this period, 31.6 percent of Indians lived below the poverty level, in contrast to 13.1 percent for the U.S. All Races population.

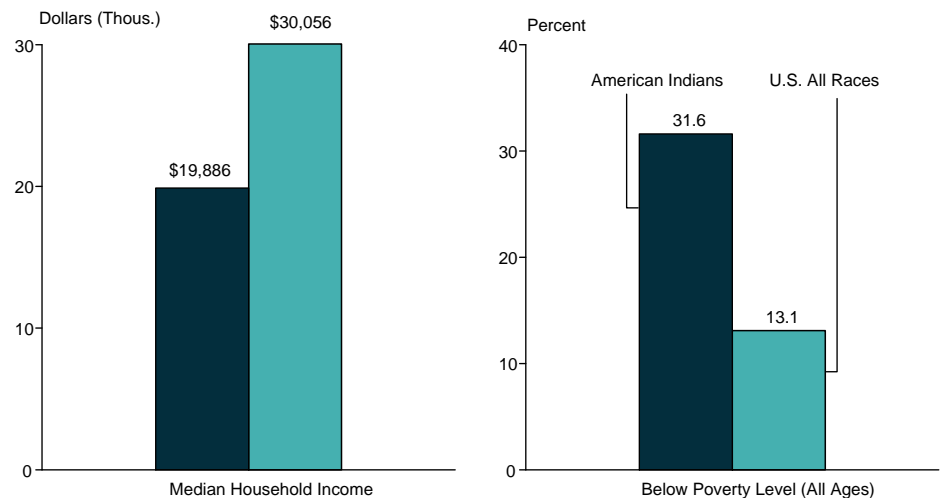


Table 2.5

Selected Economic Profiles for the United States, 1990 Census

	American Indian and Alaska Native	All Races	W hite	Black	Asian and Pacific Islander	Hispanic
<hr/>						
Educational Attainment (Persons 25 years and older):						
Percent less than 9th grade	14.2	10.4	8.9	13.8	12.9	30.7
Percent 9th to 12th grade, no diploma	20.6	14.4	13.1	23.2	9.5	19.5
Percent high school grad or higher	65.3	75.2	77.9	63.1	77.5	49.8
Percent bachelor's degree or higher	9.0	20.3	21.5	11.4	36.6	9.2
Employment Status by Sex (Persons 16 years and older):						
Percent unemployed, males	16.2	6.4	5.3	13.7	5.1	9.8
Percent unemployed, females	13.5	6.2	5.0	12.2	5.5	11.2
Household Income in 1989:						
Median household income	\$19,886	\$30,056	\$31,435	\$19,758	\$36,784	\$24,156
Percent Below the Poverty Level by Age:						
All ages	31.6	13.1	9.8	29.5	14.1	25.3
Under 5 years	43.2	20.1	13.8	44.0	17.5	33.4
5 years	41.6	19.7	13.6	42.8	18.0	33.9
6 to 11 years	37.7	18.3	12.5	39.8	17.3	32.6
12 to 17 years	33.1	16.3	11.0	35.5	16.3	30.3
18 to 64 years	27.8	11.0	8.5	23.4	13.0	21.3
65 to 74 years	27.0	10.4	8.4	28.6	11.3	21.9
75 years and older	33.2	16.5	14.6	37.3	13.5	27.8

NOTE: American Indian data are for residents of the 34 Reservation States. (South Carolina was added as a Reservation State in FY 1994).

SOURCE: U.S. Bureau of the Census, Minority Economic Profiles, July 24, 1992, Tables CPH-L-92, 93, 94, and 95, and unpublished data from the U.S. Bureau of the Census.

PART 3 – NATALITY AND INFANT/MATERNAL MORTALITY STATISTICS

Chart 3.1

Birth Rates

The American Indian and Alaska Native birth rate for 1989-1991 of 28.1 births per 1,000 population was 68 percent greater than the U.S. All Races birth rate for 1990 of 16.7, and 81 percent greater than the rate for the U.S. White population (15.5).

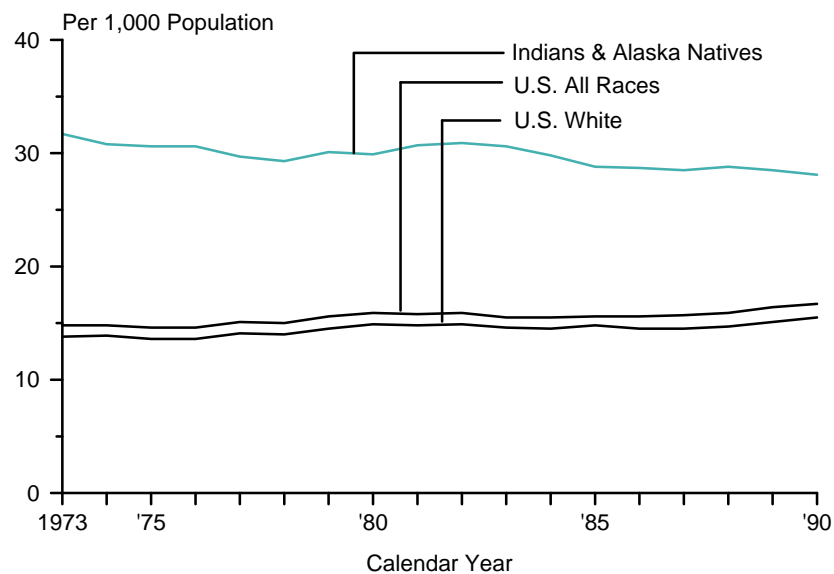


Table 3.1

Number and Rate of Live Births

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1991

Rate per 1,000 Population

Calendar Year(s)	Indian and Alaska Native		U.S. All Races		U.S. White
	Number	Rate	Number	Rate	Rate
(1991)	34,083				
1989. 1991 (1990)	33,554	28.1	4,158,212	16.7	15.5
1988. 1990 (1989)	34,143	28.5	4,040,958	16.4	15.1
1987. 1989 (1988)	32,544	28.7	3,909,510	16.0	14.8
1986. 1988 (1987)	31,133	28.3	3,809,394	15.7	14.6
1985. 1987 (1986)	29,996	28.4	3,756,547	15.6	14.6
1984. 1986 (1985)	30,194	28.4	3,760,561	15.8	14.8
1983. 1985 (1984)	28,416	29.3	3,669,141	15.6	14.6
1982. 1984 (1983)	29,352	29.9	3,638,933	15.6	14.6
1981. 1983 (1982)	28,701	30.2	3,680,537	15.9	14.9
1980. 1982 (1981)	25,595	30.0	3,629,238	15.8	14.8
1979. 1981 (1980)	25,346	29.3	3,612,258	15.9	14.9
1978. 1980 (1979)	23,252	28.4	3,494,398	15.6	14.5
1977. 1979 (1978)	20,250	29.3	3,333,279	15.0	14.0
1976. 1978 (1977)	19,458	29.7	3,326,632	15.1	14.1
1975. 1977 (1976)	18,797	30.6	3,167,788	14.6	13.6
1974. 1976 (1975)	17,852	30.6	3,144,198	14.6	13.6
1973. 1975 (1974)	17,099	30.8	3,159,958	14.8	13.9
1972. 1974 (1973)	16,662	31.7	3,136,965	14.8	13.8
(1972)	16,801		3,258,411		
1954. 1956 (1955)	17,028	37.5	4,097,000	25.0	23.8

NOTE: Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native birth rates are for the 3-year periods specified. Numbers of births and U.S. rates are for the single year specified.

Chart 3.2

***Births of Low Weight
(Under 2,500 Grams) as
a Percent of Total Live
Births by Age of Mother***

There were 5.8 percent of reported American Indian and Alaska Native live births in 1989–1991 of low birth weight, compared with 7.0 percent for the U.S. All Races population and 5.7 for the U.S. White population in 1990.

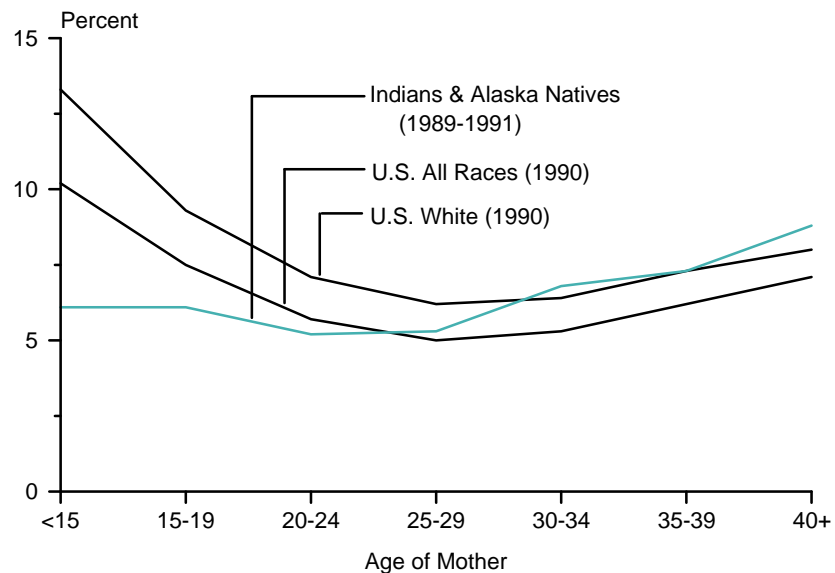


Table 3.2

Births of Low Birth Weight (Under 2,500 Grams) by Age of Mother

American Indians and Alaska Natives, IHS Service Area, 1989–1991, and U.S. All Races and White Populations, 1990

Age of Mother	Indian and Alaska Native			U.S. All Races			U.S. White		
	Total Live Births	Number Low Weight	Percent Low Weight	Total Live Births	Number Low Weight	Percent Low Weight	Total Live Births	Number Low Weight	Percent Low Weight
All Ages	¹ 101,578	5,897	5.8	¹ 4,152,908	289,418	7.0	¹ 3,221,608	182,785	5.7
Under 20 years	19,856	1,205	6.1	532,685	49,869	9.4	348,309	26,337	7.6
Under 15 years	360	22	6.1	11,628	1,545	13.3	4,840	495	10.2
15. 19 years	19,496	1,183	6.1	521,057	48,324	9.3	343,469	25,842	7.5
20. 24 years	33,633	1,762	5.2	1,092,317	77,300	7.1	816,857	46,937	5.7
25. 29 years	26,293	1,402	5.3	1,275,627	78,486	6.2	1,033,486	52,135	5.0
30. 34 years	14,885	1,008	6.8	885,018	56,444	6.4	726,610	38,536	5.3
35. 39 years	5,779	420	7.3	317,110	23,283	7.3	256,746	16,026	6.2
40 years and over	1,132	100	8.8	50,151	4,036	8.0	39,600	2,814	7.1

¹ Excludes 202 American Indian and Alaska Native live births, 5,304 U.S. All Races live births, and 3,735 U.S. White births with birth weight not stated.

Chart 3.3

Birth Order by Age of Mother, Percent Within Birth Order, American Indians and Alaska Natives

For the Indian population, 45 percent of mothers were under age 20 when they had their first child while 20 percent were at least age 25.

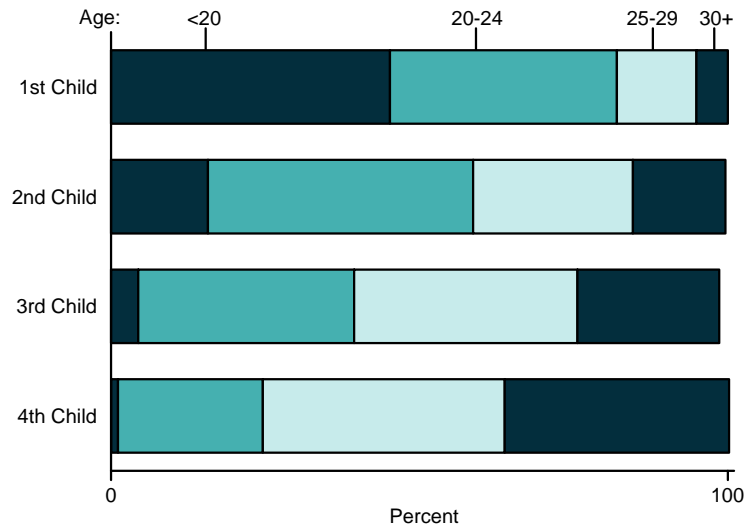


Chart 3.4

Birth Order by Age of Mother, Percent Within Birth Order, U.S. All Races

For the U.S. All Races population, 24 percent of mothers were under age 20 when they had their first child while 46 percent were at least age 25.

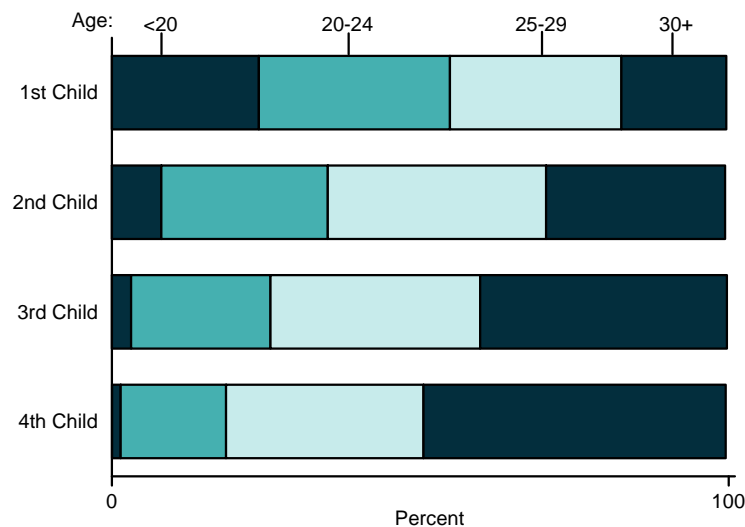


Chart 3.5

Birth Order by Age of Mother, Percent Within Birth Order, U.S. White

For the U.S. White population, 21 percent of mothers were under age 20 when they had their first child while 49 percent were at least age 25.

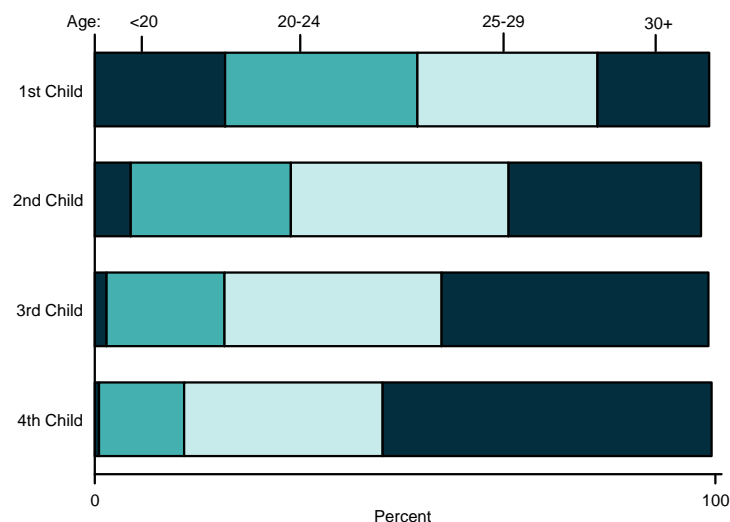


Table 3.3
Number and Percent Distribution of Live Births

By Age of Mother Within Birth Order

Age Group	Total Live Births	Live Birth Order					
		1st Child	2nd Child	3rd Child	4th Child	5th Child	6th+ Child
American Indians and Alaska Natives, IHS Service Area, 1989, 1991							
All Ages	101,780	31,748	26,710	19,712	11,683	5,992	5,637
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	19.6	45.2	16.2	5.1	1.2	0.3	0.1
20-24 years	33.0	35.1	43.3	35.0	24.1	14.7	5.6
25-29 years	25.9	13.2	26.3	35.6	38.6	35.1	25.6
30-34 years	14.7	4.9	10.8	18.0	24.9	31.5	36.5
35-39 years	5.7	1.4	3.0	5.4	9.7	15.2	25.1
40 years and over	1.1	0.2	0.4	0.9	1.5	3.2	7.1
U.S. All Races, 1990							
All Ages	¹ 4,131,655	1,689,118	1,330,852	678,709	261,277	97,196	74,503
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	12.8	23.8	7.8	3.1	1.4	0.5	0.1
20-24 years	26.3	30.5	27.1	21.9	17.6	12.9	5.8
25-29 years	30.7	27.6	33.5	33.7	32.2	29.7	21.3
30-34 years	21.3	13.7	23.4	29.0	31.6	33.5	34.3
35-39 years	7.6	3.9	7.3	10.8	14.7	19.2	28.1
40 years and over	1.2	0.5	0.9	1.5	2.6	4.3	10.3
U.S. White, 1990							
All Ages	² 3,206,945	1,332,945	1,055,427	519,494	187,763	64,903	46,413
All Ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Under 20 years	10.8	20.6	5.8	1.9	0.7	0.3	0.1
20-24 years	25.4	30.7	25.8	19.1	13.7	8.7	3.4
25-29 years	32.1	29.4	35.1	34.6	32.2	28.3	17.7
30-34 years	22.5	14.6	24.8	31.2	34.4	36.2	35.2
35-39 years	8.0	4.2	7.6	11.5	16.2	21.6	31.6
40 years and over	1.2	0.6	0.9	1.6	2.9	4.9	12.0

¹ Excludes 26,557 U.S. All Races births (0.6 percent) with birth order not reported.

² Excludes 18,398 U.S. White births (0.6 percent) with birth order not reported.

Chart 3.6

Maternal Death Rates

The maternal death rate for American Indians and Alaska Natives dropped from 27.7 maternal deaths per 100,000 live births in 1972–1974 to 9.8 in 1989–1991, a decrease of 65 percent. During 1989–1991, there were 10 Indian maternal deaths.

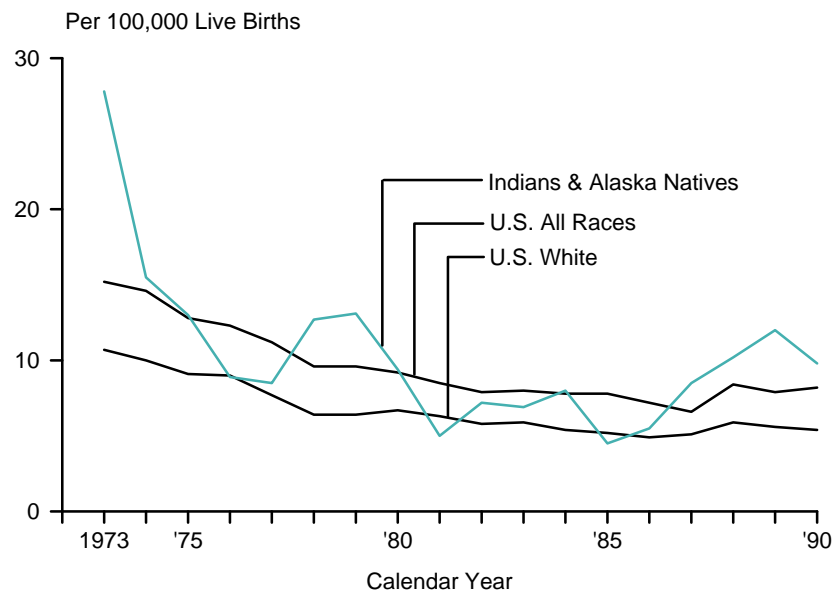


Table 3.6

Maternal Deaths and Death Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1958–1991

Rate per 100,000 Live Births

Calendar Year(s)	Indian and Alaska Native		U.S. All Races		U.S. White	Ratio of Indian to:	
	Number	Rate	Number	Rate	Rate	U.S. All Races	U.S. White
1989. 1991 (1991)	3						
1988. 1990 (1990)	4	9.8	343	8.2	5.4	1.2	1.8
1987. 1989 (1989)	3	12.0	320	7.9	5.6	1.5	2.1
1986. 1988 (1988)	5	10.2	330	8.4	5.9	1.2	1.7
1985. 1987 (1987)	2	8.5	251	6.6	5.1	1.3	1.7
1984. 1986 (1986)	1	5.5	272	7.2	4.9	0.8	1.1
1983. 1985 (1985)	2	4.5	295	7.8	5.2	0.6	0.9
1982. 1984 (1984)	1	8.0	285	7.8	5.4	1.0	1.5
1981. 1983 (1983)	4	6.9	290	8.0	5.9	0.9	1.2
1980. 1982 (1982)	1	7.2	292	7.9	5.8	0.9	1.2
1979. 1981 (1981)	1	5.0	309	8.5	6.3	0.6	0.8
1978. 1980 (1980)	2	9.4	334	9.2	6.7	1.0	1.4
1977. 1979 (1979)	4	13.1	336	9.6	6.4	1.4	2.0
1976. 1978 (1978)	3	12.7	321	9.6	6.4	1.3	2.0
1975. 1977 (1977)	1	8.5	373	11.2	7.7	0.8	1.1
1974. 1976 (1976)	1	8.9	390	12.3	9.0	0.7	1.0
1973. 1975 (1975)	3	13.0	340	12.8	9.1	1.0	1.4
1972. 1974 (1974)	3	15.5	462	14.6	10.0	1.1	1.6
1971. 1973 (1973)	2	27.7	477	15.2	10.7	1.8	2.6
1970. 1972 (1972)	9						
1957. 1959 (1958)	16	82.6	1,581	37.6	26.3	2.2	3.1

NOTE: Data are presented above for the year in which maternal mortality data were first collected (1958) and as close to the year in which IHS was established (1955) as is possible. For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native maternal mortality rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single years specified. Maternal deaths include deaths with ICD-9 codes 630. 676.

Chart 3.7

Infant Mortality Rates

The infant mortality rate for American Indians and Alaska Natives dropped from 22.2 infant deaths per 1,000 live births in 1972–1974 to 10.2 in 1989–1991, a decrease of 54 percent. The U.S. All Races and White populations' rates for 1990 were 9.2 and 7.7, respectively.

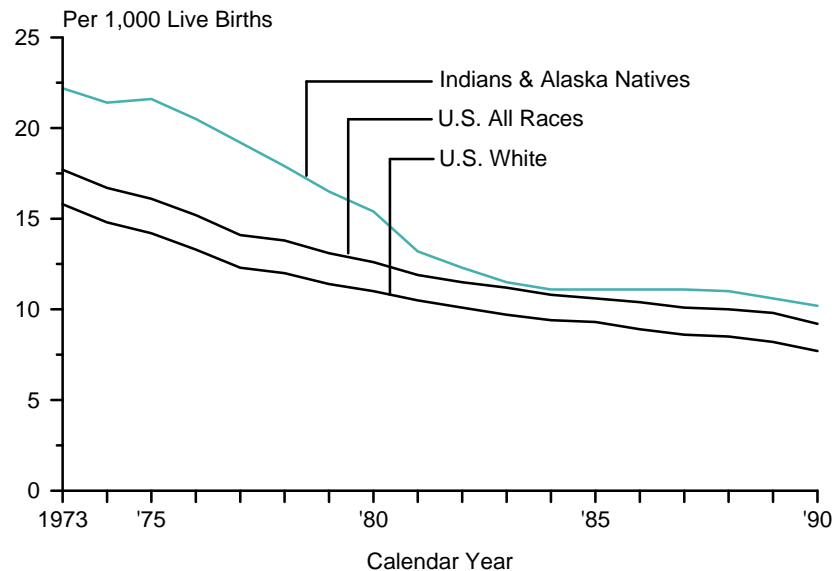


Table 3.7

Infant Mortality Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955–1990

Rate per 1,000 Live Births

Calendar Year(s)	Indian and Alaska Native	U.S. All Races	U.S. White	Ratio of Indian and Alaska Native to:	
				U.S. All Races	U.S. White
1989, 1991 (1990)	10.2	9.2	7.7	1.1	1.3
1988, 1990 (1989)	10.6	9.8	8.2	1.1	1.3
1987, 1989 (1988)	11.0	10.0	8.5	1.1	1.3
1986, 1988 (1987)	11.1	10.1	8.6	1.1	1.3
1985, 1987 (1986)	11.1	10.4	8.9	1.1	1.2
1984, 1986 (1985)	11.1	10.6	9.3	1.0	1.2
1983, 1985 (1984)	11.1	10.8	9.4	1.0	1.2
1982, 1984 (1983)	11.5	11.2	9.7	1.0	1.2
1981, 1983 (1982)	12.3	11.5	10.1	1.1	1.2
1980, 1982 (1981)	13.2	11.9	10.5	1.1	1.3
1979, 1981 (1980)	15.4	12.6	11.0	1.2	1.4
1978, 1980 (1979)	16.5	13.1	11.4	1.3	1.4
1977, 1979 (1978)	17.9	13.8	12.0	1.3	1.5
1976, 1978 (1977)	19.2	14.1	12.3	1.4	1.6
1975, 1977 (1976)	20.5	15.2	13.3	1.3	1.5
1974, 1976 (1975)	21.6	16.1	14.2	1.3	1.5
1973, 1975 (1974)	21.4	16.7	14.8	1.3	1.4
1972, 1974 (1973)	22.2	17.7	15.8	1.3	1.4
1954, 1956 (1955)	62.7	26.4	23.6	2.4	2.7

NOTE: Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. U.S. rates are for the single years specified.

Chart 3.8

***Infant Mortality Rates
by Age***

The neonatal mortality rate for American Indians and Alaska Natives in 1989-1991 was 19 percent lower than the U.S. All Races rate and 4 percent lower than the U.S. White rate for 1990. On the contrary, the postneonatal rate for Indians was 1.6 and 2.0 times the U.S. All Races and White populations' rates, respectively.

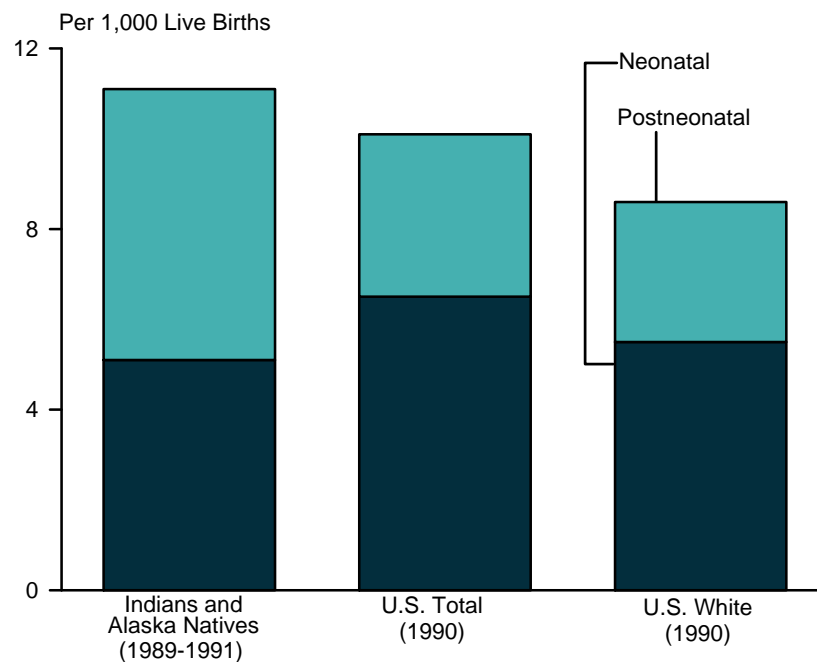


Table 3.8

Infant Mortality Rates by Age

American Indians and Alaska Natives, IHS Service Area, 1972–1974 to 1989–1991, and U.S. All Races and White Populations, 1973–1990

Rate per 1,000 Live Births

American Indian and Alaska Native						
Calendar Years	Infant Mortality Rate	Neonatal Under 28 Days	Postneonatal 28 Days. 11 Months			
1989. 1991	10.2	4.7	5.5			
1988. 1990	10.6	4.8	5.8			
1987. 1989	11.0	5.1	5.9			
1986. 1988	11.1	5.2	5.9			
1985. 1987	11.1	5.3	5.9			
1984. 1986	11.1	5.0	6.0			
1983. 1985	11.1	5.1	6.0			
1982. 1984	11.5	5.1	6.4			
1981. 1983	12.3	5.3	7.0			
1980. 1982	13.2	5.9	7.3			
1979. 1981	15.4	7.2	8.1			
1978. 1980	16.5	8.2	8.4			
1977. 1979	17.9	8.9	9.0			
1976. 1978	19.2	9.3	9.9			
1975. 1977	20.5	10.0	10.5			
1974. 1976	21.6	10.4	11.2			
1973. 1975	21.4	10.4	11.1			
1972. 1974	22.2	10.2	12.0			
U.S. All Races				U.S. White		
Calendar Year	Infant Mortality Rate	Neonatal Under 28 Days	Postneonatal 28 Days. 11 Months	Infant Mortality Rate	Neonatal Under 28 Days	Postneonatal 28 Days. 11 Months
1990	9.2	5.8	3.4	7.7	4.9	2.8
1989	9.8	6.2	3.6	8.2	5.2	3.0
1988	10.0	6.3	3.7	8.5	5.4	3.1
1987	10.1	6.5	3.6	8.6	5.5	3.1
1986	10.4	6.7	3.6	8.9	5.8	3.1
1985	10.6	7.0	3.7	9.3	6.1	3.2
1984	10.8	7.0	3.8	9.4	6.2	3.3
1983	11.2	7.3	3.9	9.7	6.4	3.3
1982	11.5	7.7	3.8	10.1	6.8	3.3
1981	11.9	8.0	3.9	10.5	7.1	3.4
1980	12.6	8.5	4.1	11.0	7.5	3.5
1979	13.1	8.9	4.2	11.4	7.9	3.5
1978	13.8	9.5	4.3	12.0	8.4	3.6
1977	14.1	9.9	4.2	12.3	8.7	3.6
1976	15.2	10.9	4.3	13.3	9.7	3.6
1975	16.1	11.6	4.5	14.2	10.4	3.8
1974	16.7	12.3	4.4	14.8	11.1	3.7
1973	17.7	13.0	4.7	15.8	11.8	4.0

NOTE: Starting in 1972 data on infant mortality by age are first available, and are shown above, for the specific counties in the IHS service area.

Chart 3.9

Leading Causes of Infant Deaths (Birth to Under 1 Year)

The two leading causes of infant deaths for American Indians and Alaska Natives (1989-1991) were sudden infant death syndrome (SIDS) and congenital anomalies. For the U.S. All Races and White populations (1990), the order was reversed.

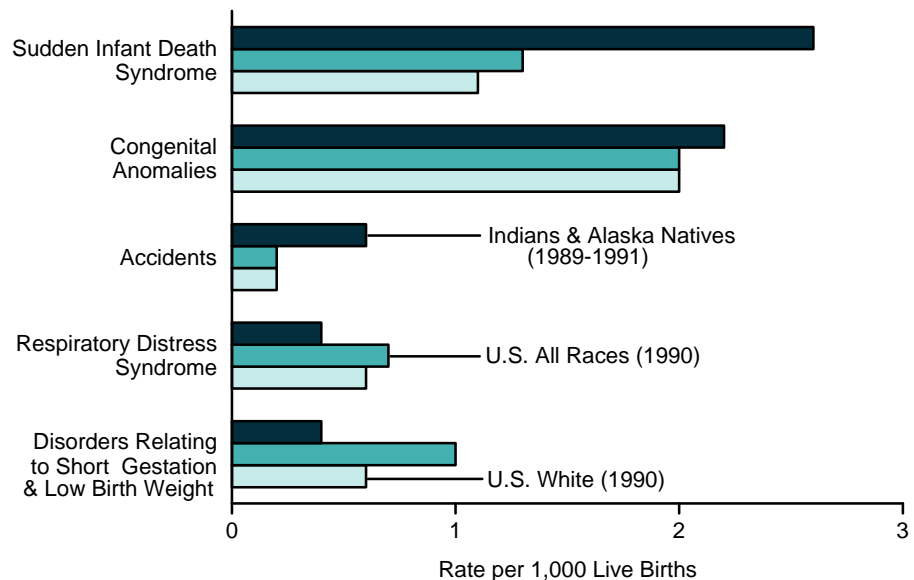


Chart 3.10

Leading Causes of Neonatal Deaths (Under 28 Days)

The two leading causes of neonatal deaths for American Indians and Alaska Natives (1989-1991) and the U.S. All Races and White populations (1990) were congenital anomalies and disorders related to short gestation and low birth weight.

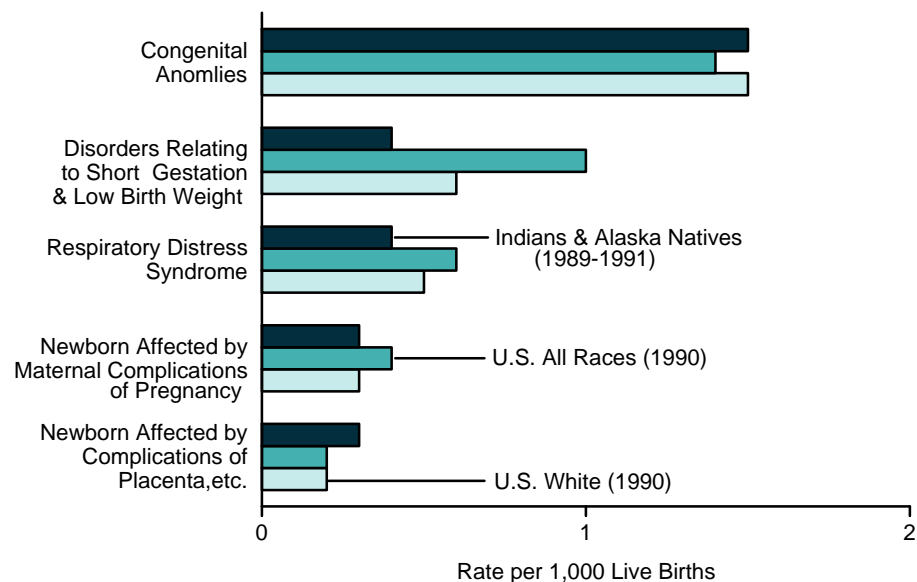


Chart 3.11

***Leading Causes of
Postneonatal Deaths (28
Days to Under 1 Year)***

The two leading causes of postneonatal deaths for American Indians and Alaska Natives (1989–1991) and the U.S. All Races and White populations (1990) were sudden infant death syndrome (SIDS) and congenital anomalies.

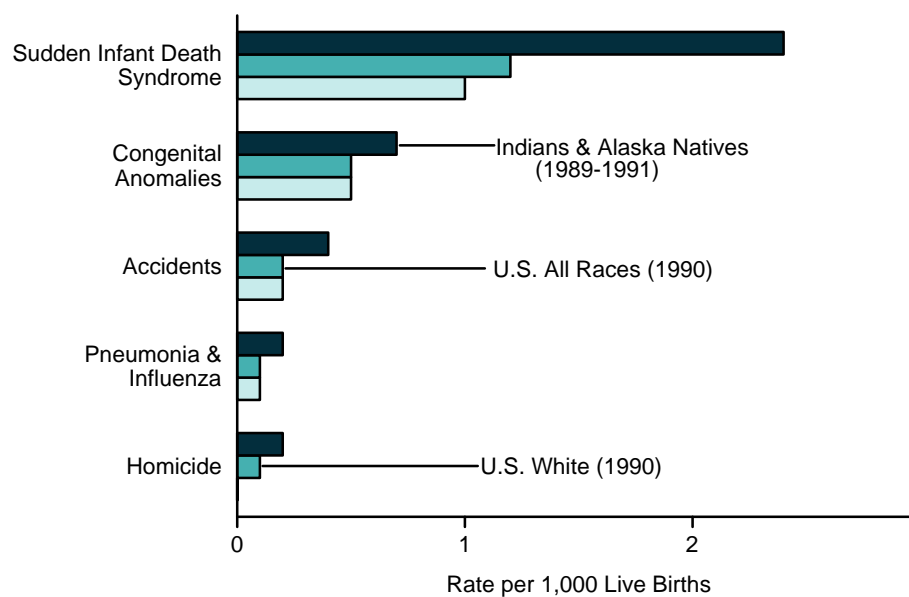


Table 3.9

Leading Causes of Infant Deaths by Age

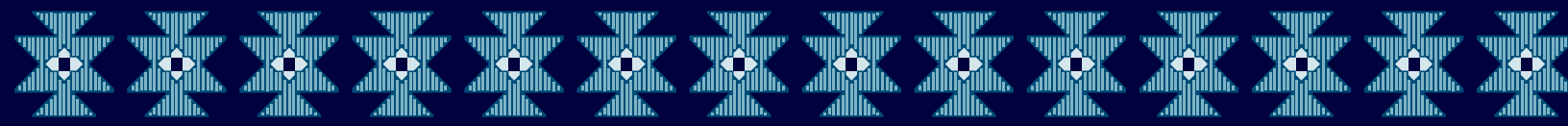
American Indians and Alaska Natives, IHS Service Area, 1989–1991, and U.S. All Races and White Populations, 1990

Rate per 1,000 Live Births

Cause of Death and ICD-9 Code(s)	American Indian and Alaska Native		U.S. All Races Rate	U.S. White Rate	Ratio of American Indian and Alaska Native to:	
	Number	Rate			U.S. All Races	U.S. White
Total Infant Deaths						
All Causes	1,038	10.3	9.2	7.7	1.1	1.3
Sudden infant death syndrome, 798.0	259	2.6	1.3	1.1	2.0	2.4
Congenital anomalies, 740. 759	226	2.2	2.0	2.0	1.1	1.1
Accidents, E800. E949	63	0.6	0.2	0.2	3.0	3.0
Respiratory distress syndrome, 769	44	0.4	0.7	0.6	0.6	0.7
Disorders relating to short gestation and low birth weight, 765	42	0.4	1.0	0.6	0.4	0.7
Pneumonia and influenza, 480. 487	30	0.3	0.2	0.1	1.5	3.0
Newborn affected by maternal complications of pregnancy, 761	28	0.3	0.4	0.3	0.8	1.0
Newborn affected by complications of placenta, cord, and membranes, 762	26	0.3	0.2	0.2	1.5	1.5
Infections specific to the perinatal period, 771	21	0.2	0.2	0.2	1.0	1.0
Meningitis, 320-322	16	0.2	0.0	0.0	*	*
All other causes	283					
Neonatal Deaths						
All Causes	475	4.7	5.8	4.9	0.8	1.0
Congenital anomalies, 740. 759	156	1.5	1.4	1.5	1.1	1.0
Disorders relating to short gestation and low birth weight, 765	42	0.4	1.0	0.6	0.4	0.7
Respiratory distress syndrome, 769	40	0.4	0.6	0.5	0.7	0.8
Newborn affected by maternal complications of pregnancy, 761	26	0.3	0.4	0.3	0.8	1.0
Newborn affected by complications of placenta, cord, and membranes, 762	26	0.3	0.2	0.2	1.5	1.5
Infections specific to the perinatal period, 771	20	0.2	0.2	0.2	1.0	1.0
Sudden infant death syndrome, 798.0	20	0.2	0.1	0.1	2.0	2.0
Intrauterine hypoxia and birth asphyxia, 768	16	0.2	0.2	0.1	1.0	2.0
Pneumonia and influenza, 480-487	5	0.0	0.0	0.0	*	*
Birth trauma, 767	5	0.0	0.0	0.0	*	*
All other causes	119					
Postneonatal Deaths						
All Causes	563	5.6	3.4	2.8	1.6	2.0
Sudden infant death syndrome, 798.0	239	2.4	1.2	1.0	2.0	2.4
Congenital anomalies, 740. 759	70	0.7	0.5	0.5	1.4	1.4
Accidents, E800. E949	38	0.4	0.2	0.2	2.0	2.0
Pneumonia and influenza, 480. 487	25	0.2	0.1	0.1	2.0	2.0
Homicide, E960. E969	16	0.2	0.1	0.0	2.0	*
Meningitis, 320. 322	14	0.1	0.0	0.0	*	*
Viral diseases, 045. 079	11	0.1	0.0	0.0	*	*
Septicemia, 038	9	0.1	0.1	0.0	1.0	*
Bronchitis and bronchiolitis, 466, 490. 491	8	0.1	0.0	0.0	*	*
Respiratory distress syndrome, 769	4	0.0	0.0	0.0	*	*
All other causes	129					

NOTE: 0.0 rounds to zero. * Not applicable.

SOURCE: National Center for Health Statistics (NCHS), U.S. infant mortality rates (all ages). Monthly Vital Statistics Report, Advance Report of Final Mortality Statistics, 1990, Vol. 41 No. 7, Supplement, January 7, 1993, Table 23; and Infant mortality rates by age and race, 1990, unpublished, from NCHS.



PART 4 - GENERAL MORTALITY STATISTICS

Chart 4.1
Mortality Rates, Leading Causes: Ages 1 to 14 Years

The two leading causes of death for American Indians and Alaska Natives ages 1 to 14 (1989–1991) were accidents and congenital anomalies. For the U.S. All Races and White populations (1990), they were accidents and malignant neoplasms.

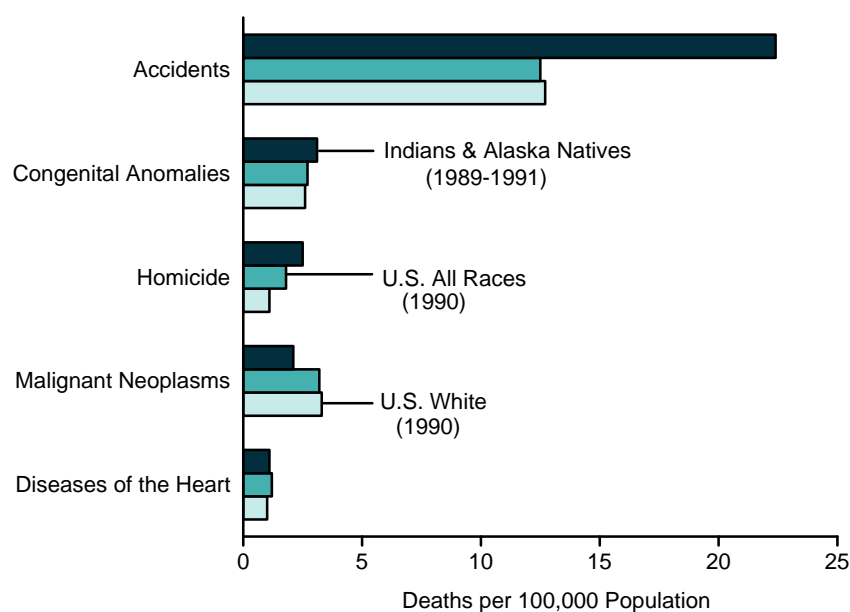


Table 4.1
Ten Leading Causes of Death for Decedents 1 to 14 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1989–1991, and U.S. All Races and White Populations, 1990
Rate per 100,000 Population

Cause of Death and ICD-9 Code(s)	American Indian and Alaska Native		U.S. All Races Rate	U.S. White Rate	Ratio American Indian and Alaska Native to:	
	Number	Rate			U.S. All Races	U.S. White
All Causes	510	41.8	30.8	27.8	1.4	1.5
Accidents	273	22.4	12.5	12.7	1.8	1.8
Motor vehicle	132	10.8	6.0	5.7	1.8	1.9
Other accidents	141	11.5	6.5	6.9	1.8	1.7
Congenital anomalies	38	3.1	2.7	2.6	1.1	1.2
Homicide	30	2.5	1.8	1.1	1.4	2.3
Malignant neoplasms	26	2.1	3.2	3.3	0.7	0.6
Diseases of the heart	13	1.1	1.2	1.0	0.9	1.1
Suicide	10	0.8	0.5	0.6	1.6	1.3
Pneumonia and influenza	7	0.6	0.6	0.5	1.0	1.2
Septicemia, 038	5	0.4	0.3	0.3	1.3	1.3
Certain conditions originating in the perinatal period, 760-779	4	0.3	0.3	0.3	1.0	1.0
Benign neoplasms, 210-239	4	0.3	0.4	0.4	0.8	0.8
All other causes	99					

NOTE: For ICD-9 codes utilized not shown above, refer to Tables 4.6 and 4.7.

Chart 4.2
Mortality Rates, Leading Causes: Ages 15 to 24 Years

The two leading causes of death for American Indians and Alaska Natives ages 15 to 24 years (1989–1991) and U.S. Whites (1990) were accidents and suicide. For the U.S. All Races (1990), they were accidents and homicide.

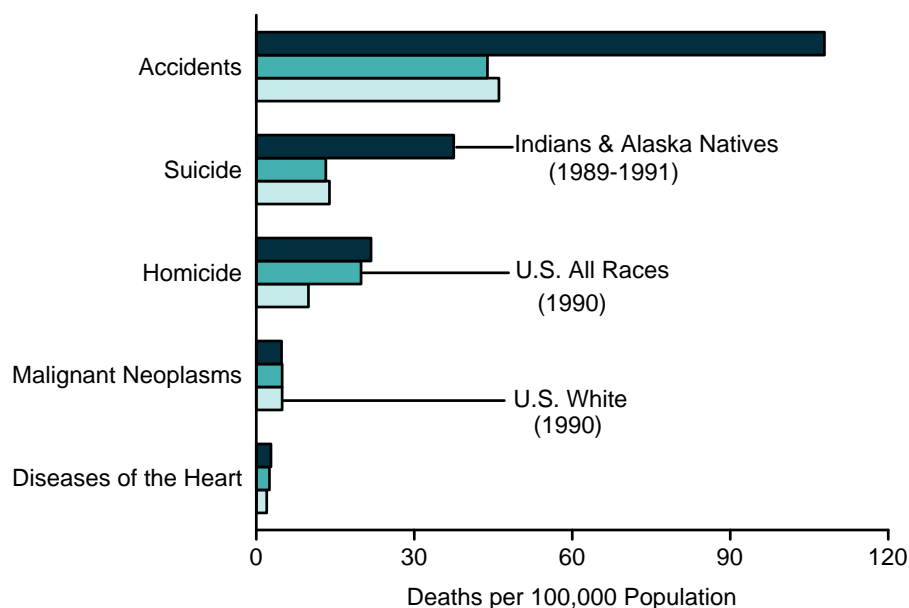


Table 4.2
Ten Leading Causes of Death for Decedents 15 to 24 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1989–1991 and U.S. All Races and White Populations, 1990
Rate per 100,000 Population

Cause of Death	American Indian and Alaska Native		U.S. All Races Rate	U.S. White Rate	Ratio American Indian and Alaska Native to:	
	Number	Rate			U.S. All Races	U.S. White
All Causes	1,280	199.3	99.2	89.7	2.0	2.2
Accidents	693	107.9	43.9	46.1	2.5	2.3
Motor vehicle	490	76.3	34.1	36.5	2.2	2.1
Other accidents	203	31.6	9.8	9.7	3.2	3.3
Suicide	241	37.5	13.2	13.9	2.8	2.7
Homicide	140	21.8	19.9	9.9	1.1	2.2
Malignant neoplasms	31	4.8	4.9	4.9	1.0	1.0
Diseases of the heart	18	2.8	2.5	2.0	1.1	1.4
Chronic liver disease and cirrhosis	6	0.9	0.1	0.1	9.0	9.0
Congenital anomalies, 740–759	6	0.9	1.3	1.3	0.7	0.7
Pneumonia and influenza	6	0.9	0.6	0.5	1.5	1.8
Viral hepatitis, 070	4	0.6	0.1	0.1	6.0	6.0
Nephritis, nephrotic syndrome and nephrosis	4	0.6	0.2	0.1	3.0	6.0
Human immunodeficiency virus (HIV) infection, 042-044	4	0.6	1.5	1.0	0.4	0.6
All other causes	127					

NOTE: For ICD-9 codes utilized refer to Tables 4.6 and 4.7.

Chart 4.3
Mortality Rates, Leading Causes: Ages 25 to 44 Years

The two leading causes of death for American Indians and Alaska Natives ages 25 to 44 years (1989–1991) were accidents and chronic liver disease and cirrhosis. For the U.S. All Races and White populations (1990), they were accidents and malignant neoplasms.

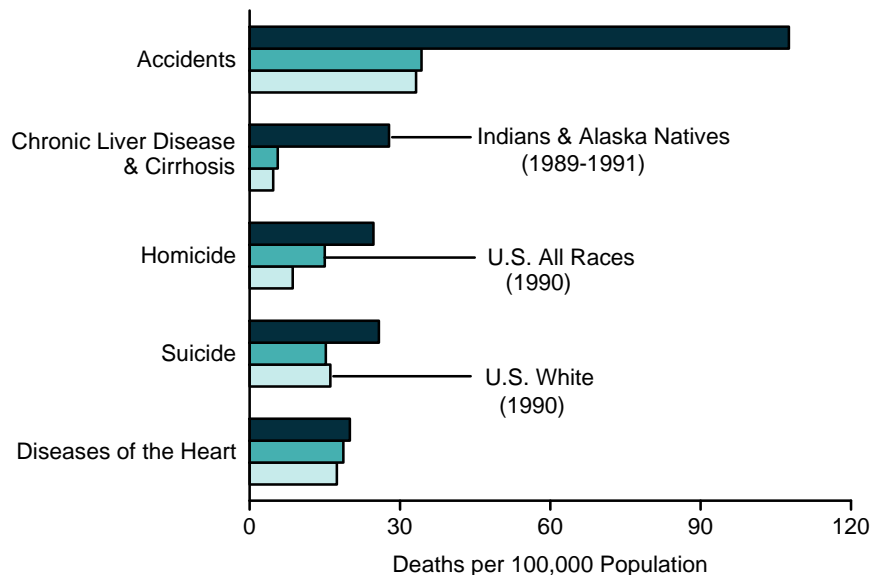


Table 4.3
Ten Leading Causes of Death for Decedents 25 to 44 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1989–1991 and U.S. All Races and White Populations, 1990
Rate per 100,000 Population

Cause of Death	American Indian and Alaska Native		U.S. All Races Rate	U.S. White Rate	Ratio American Indian and Alaska Native to:	
	Number	Rate			U.S. All Races	U.S. White
All Causes	3,238	302.5	178.2	153.8	1.7	2.0
Accidents	1,152	107.6	34.3	33.2	3.1	3.2
Motor vehicle	693	64.7	20.5	20.3	3.2	3.2
Other accidents	459	42.9	13.9	12.9	3.1	3.3
Chronic liver disease and cirrhosis	304	28.4	5.6	4.7	5.1	6.0
Homicide	264	24.7	15.0	8.6	1.6	2.9
Suicide	262	24.5	15.2	16.1	1.6	1.5
Diseases of the heart	214	20.0	18.7	17.4	1.1	1.1
Malignant neoplasms	213	19.9	26.9	25.7	0.7	0.8
Pneumonia and influenza	58	5.4	2.7	1.9	2.0	2.8
Cerebrovascular diseases	55	5.1	4.2	3.1	1.2	1.6
Human immunodeficiency virus (HIV) infection, 042-044	51	4.8	23.3	18.8	0.2	0.3
Diabetes mellitus	44	4.1	2.7	2.4	1.5	1.7
All other causes	621					

NOTE: For ICD-9 codes utilized refer to Tables 4.6 and 4.7.

Chart 4.4
Mortality Rates, Leading Causes: Ages 45 to 64 Years

The two leading causes of death for American Indians and Alaska Natives ages 45 to 64 years (1989-1991) were diseases of the heart and malignant neoplasms. This ranking was the same for the U.S. All Races and White populations (1990).

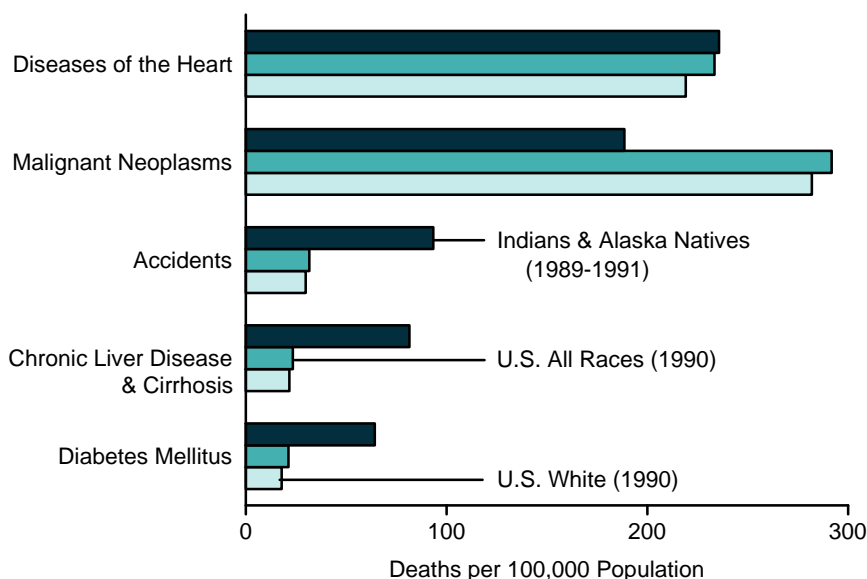


Table 4.4
Ten Leading Causes of Death for Decedents 45 to 64 Years of Age

American Indians and Alaska Natives, IHS Service Area, 1989-1991, and U.S. All Races and White Populations, 1990
Rate per 100,000 Population

Cause of Death	American Indian and Alaska Native		U.S. All Races Rate	U.S. White Rate	Ratio American Indian and Alaska Native to:	
	Number	Rate			U.S. All Races	U.S. White
All Causes	4,562	943.2	804.2	751.6	1.2	1.3
Diseases of the heart	1,140	235.7	233.4	219.1	1.0	1.1
Malignant neoplasms	912	188.6	291.8	281.9	0.6	0.7
Accidents	453	93.7	31.6	29.8	3.0	3.1
Motor vehicle	231	47.8	15.8	15.1	3.0	3.2
Other accidents	222	45.9	15.9	14.7	2.9	3.1
Chronic liver disease and cirrhosis	394	81.5	23.4	21.7	3.5	3.8
Diabetes mellitus	311	64.3	21.2	17.9	3.0	3.6
Cerebrovascular diseases	160	33.1	32.1	26.5	1.0	1.2
Pneumonia and influenza	133	27.5	12.3	10.8	2.2	2.5
Chronic obstructive pulmonary diseases and allied cond.	87	18.0	27.3	27.6	0.7	0.7
Homicide	64	13.2	6.4	4.6	2.1	2.9
Nephritis, nephrotic syndrome, and nephrosis	63	13.0	5.3	3.9	2.5	3.3
All other causes	845					

NOTE: For ICD-9 codes utilized refer to Tables 4.6 and 4.7.

Chart 4.5
Mortality Rates, Leading Causes: Ages 65+ Years

The two leading causes of death for American Indians and Alaska Natives, ages 65 and over (1989–1991), were diseases of the heart and malignant neoplasms. For the U.S. All Races and White populations (1990), they were also diseases of the heart and malignant neoplasms.

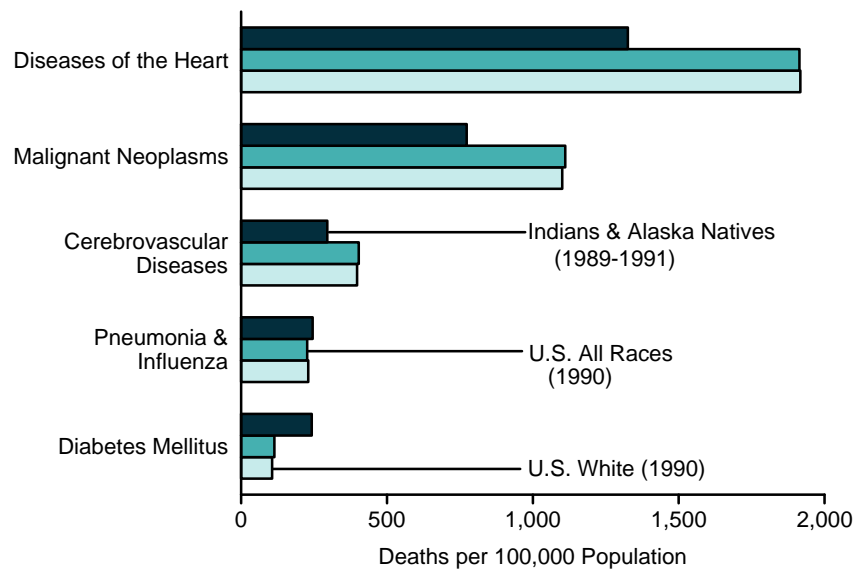


Table 4.5
Ten Leading Causes of Death for Decedents 65 Years Old and Older

American Indians and Alaska Natives, IHS Service Area, 1989–1991, and U.S. All Races and White Populations, 1990
Rate per 100,000 Population

Cause of Death and ICD-9 Code(s)	American Indian and Alaska Native		U.S. All Races Rate	U.S. White Rate	Ratio American Indian and Alaska Native to:	
	Number	Rate			U.S. All Races	U.S. White
All Causes	8,449	4,059.1	4,963.3	4,942.6	0.8	0.8
Diseases of the heart	2,759	1,325.5	1,914.1	1,917.3	0.7	0.7
Malignant neoplasms	1,610	773.5	1,111.4	1,100.8	0.7	0.7
Cerebrovascular diseases	615	295.5	403.5	397.8	0.7	0.7
Pneumonia and influenza	510	245.0	226.8	230.0	1.1	1.1
Diabetes mellitus	504	242.1	114.3	106.3	2.1	2.3
Chronic obstructive pulmonary diseases and allied cond.	323	155.2	234.1	243.8	0.7	0.6
Accidents	291	139.8	84.3	82.5	1.7	1.7
Motor vehicle	84	40.4	23.2	23.1	1.7	1.7
Other accidents	207	99.4	61.1	59.4	1.6	1.7
Nephritis, nephrotic syndrome, and nephrosis	174	83.6	55.7	51.5	1.5	1.6
Chronic liver disease and cirrhosis	148	71.1	33.5	34.0	2.1	2.1
Septicemia, 038	110	52.8	49.4	46.0	1.1	1.1
All other causes	1,405					

NOTE: For ICD-9 codes utilized not shown above, refer to Tables 4.6 and 4.7.

Chart 4.6
Mortality Rates for
Leading Causes, Indians
and Alaska Natives
(1989–1991)

The leading cause of death for American Indians and Alaska Natives (1989–1991) and the U.S. All Races and White populations (1990) was diseases of the heart. The second leading cause for Indians was accidents in contrast to malignant neoplasms for U.S. All Races and Whites.

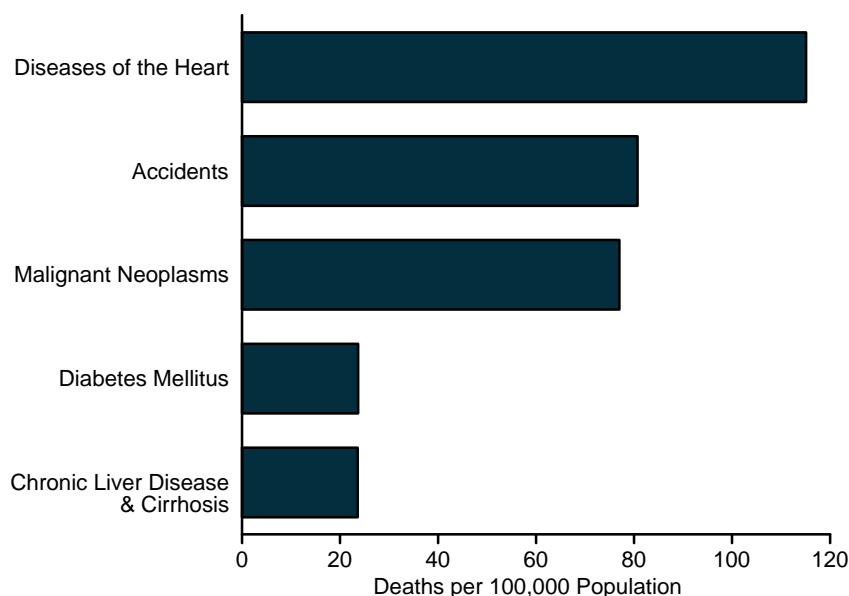


Table 4.6
Ten Leading Causes of
Death for Decedents of
All Ages

American Indians and
 Alaska Natives, IHS Service
 Area, 1989–1991

Rate per 100,000 Population

Cause of Death and ICD-9 Code(s)	Number	Rate
All Causes	19,084	526.4
Diseases of the heart, 390–398, 402, 404–429	4,173	115.1
Accidents, E800–E949	2,927	80.7
Motor vehicle, E810–E825	1,642	45.3
Other accidents, E800–E807, E826–E949	1,285	35.4
Malignant neoplasms, 140–208	2,793	77.0
Diabetes mellitus, 250	861	23.7
Chronic liver disease and cirrhosis, 571	854	23.6
Cerebrovascular diseases, 430–438	839	23.1
Pneumonia and influenza, 480–487	744	20.5
Suicide, E950–E959	571	15.7
Homicide and legal intervention, E960–E978	530	14.6
Chronic obstructive pulmonary diseases, 490–496	436	12.0
All other causes	4,356	

Chart 4.7
Mortality Rates, Leading Causes: Males, Indians, and Alaska Natives (1989–1991)

The two leading causes of death for Indian males (1989–1991) were diseases of the heart and accidents. For U.S. All Races and White males (1990), they were diseases of the heart and malignant neoplasms.

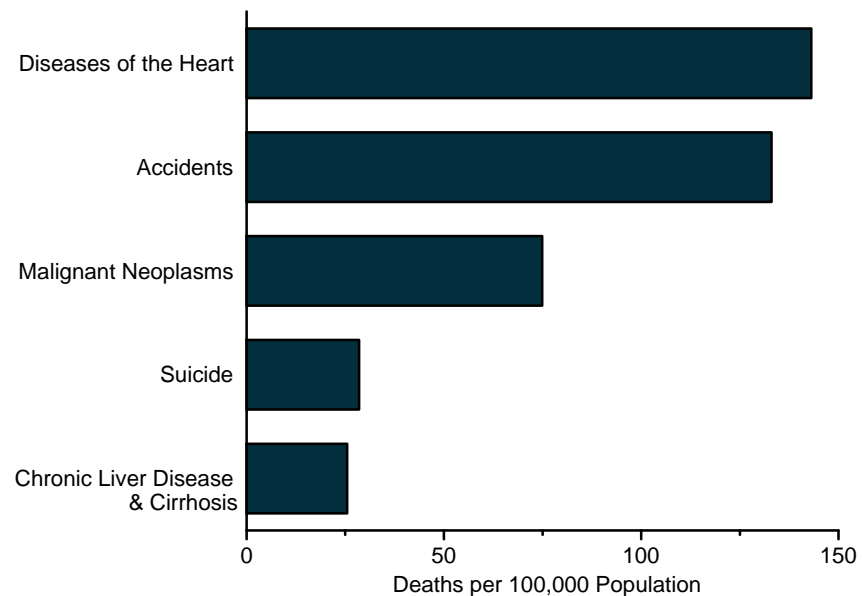


Chart 4.8
Mortality Rates, Leading Causes: Females, Indians, and Alaska Natives (1989–1991)

The two leading causes of death for Indian females (1989–1991) were diseases of the heart and malignant neoplasms. The same was true for U.S. All Races and White females in 1990.

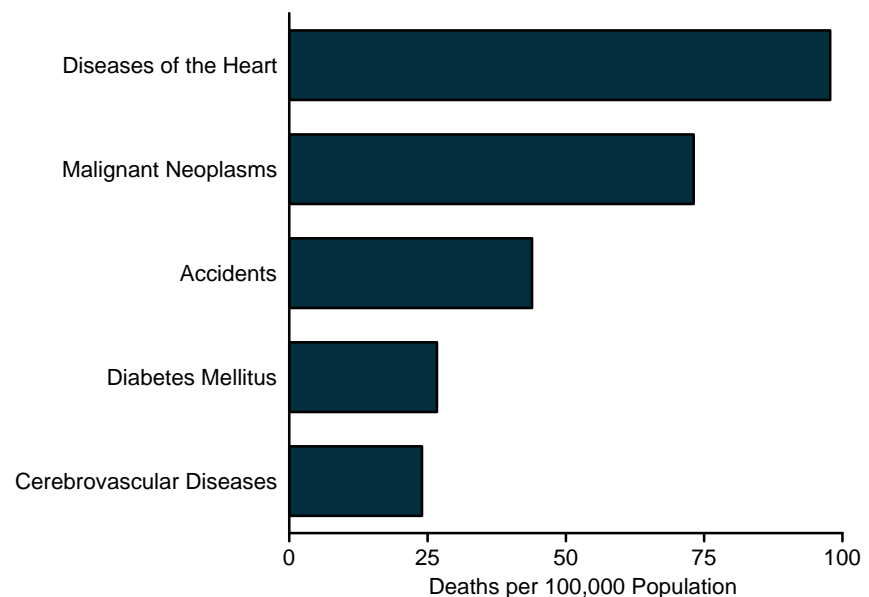


Table 4.7
Leading Causes of Death
by Sex

American Indians and
Alaska Natives, IHS Service
Area, 1989–1991

Rate per 100,000 Population

Male		
Cause of Death and ICD-9 Code	Number	Rate
All Causes	11,183	626.5
Diseases of the heart, 390–398, 402, 404–429	2,481	139.0
Accidents, E800–E949	2,164	121.2
Motor vehicle, E810–E825	1,173	65.7
Other accidents, E800–E807, E826–E949	991	55.5
Malignant neoplasms, 140–208	1,394	78.1
Suicide, E950–E959	493	27.6
Chronic liver disease and cirrhosis, 571	468	26.2
Pneumonia and influenza, 480–487	417	23.4
Homicide and legal intervention, E960–E978	398	22.3
Cerebrovascular diseases, 430–438	388	21.7
Diabetes mellitus, 250	357	20.0
Chronic obstructive pulmonary diseases and allied conditions, 490–496	256	14.3
All other causes	2,367	
Female		
Cause of Death and ICD-9 Code	Number	Rate
All Causes	7,901	429.3
Diseases of the heart, 390–398, 402, 404–429	1,692	91.9
Malignant neoplasms, 140–208	1,399	76.0
Accidents, E800–E949	763	41.5
Motor vehicle, E810–E825	469	25.5
Other accidents, E800–E807, E826–E949	294	16.0
Diabetes mellitus, 250	504	27.4
Cerebrovascular diseases, 430–438	451	24.5
Chronic liver disease and cirrhosis, 571	386	21.0
Pneumonia and influenza, 480–487	327	17.8
Chronic obstructive pulmonary diseases and allied conditions, 490–496	180	9.8
Congenital anomalies, 740-759	145	7.9
Nephritis, nephrotic syndrome, and nephrosis, 580–589	139	7.6
All other causes	1,915	

Chart 4.9
***Selected Age-Adjusted
Death Rates, Ratio of
Indians to U.S. All Races***

The American Indian and Alaska Native age-adjusted mortality rates for 1989-1991 were above those of the U.S. All Races (1990) for tuberculosis, chronic liver disease and cirrhosis, accidents, diabetes mellitus, homicide, pneumonia and influenza, and suicide. Indian rates were below those of the U.S. All Races for chronic obstructive pulmonary diseases, malignant neoplasms, and major cardiovascular diseases.

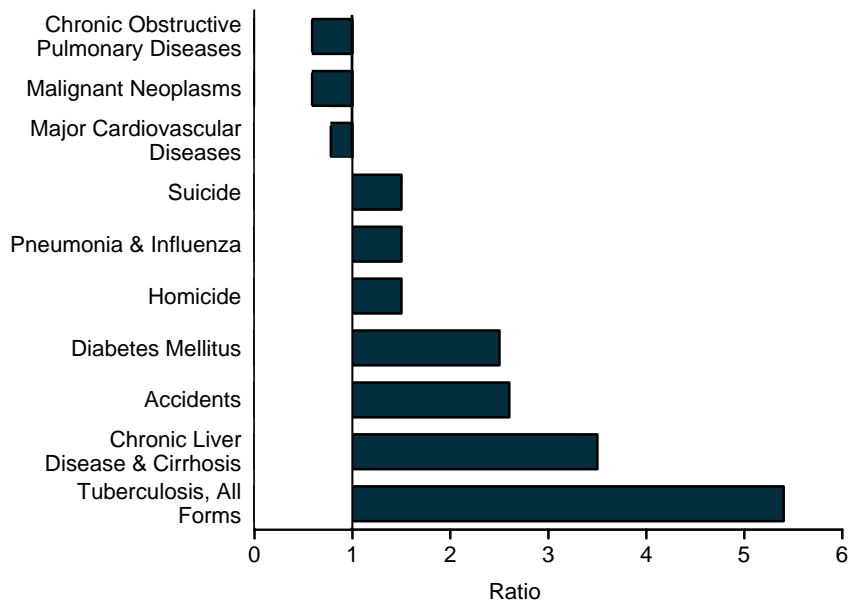


Table 4.9
***Age-Adjusted Mortality
Rates***

American Indians and Alaska Natives, IHS Service Area, 1989-1991, and U.S. All Races and White Populations, 1990

Rate per 100,000 Population

Cause of Death	Indian and Alaska Native	United States			Ratio American Indian and Alaska Native to:	
		All Races	White	All Other	U.S. All Races	U.S. White
All Causes	585.2	520.2	492.8	686.7	1.1	1.2
Major cardiovascular diseases	163.7	189.8	182.1	242.2	0.9	0.9
Diseases of heart	132.1	152.0	146.9	186.1	0.9	0.9
Cerebrovascular diseases	25.2	27.7	25.5	43.1	0.9	1.0
Atherosclerosis	2.0	2.7	2.7	2.7	0.7	0.7
Hypertension	1.6	1.9	1.5	5.1	0.7	1.1
Accidents	86.0	32.5	31.8	36.8	2.6	2.7
Motor vehicle	48.4	18.5	18.6	18.0	2.6	2.6
All other	37.6	14.0	13.2	18.8	2.7	2.8
Malignant neoplasms	94.5	135.0	131.5	159.7	0.7	0.7
Chronic liver disease and cirrhosis	30.3	8.6	8.0	12.0	3.5	3.8
Diabetes mellitus	29.7	11.7	10.4	21.6	2.5	2.9
Pneumonia and influenza	20.5	14.0	13.4	17.9	1.5	1.5
Suicide	16.5	11.5	12.2	7.1	1.4	1.4
Homicide	15.3	10.2	5.9	31.4	1.5	2.6
Chronic obstructive pulmonary diseases and allied conditions	13.8	19.7	20.1	15.2	0.7	0.7
Tuberculosis, all forms	2.7	0.5	0.3	1.9	5.4	9.0

SOURCE: U.S. Mortality Rates: Monthly Vital Statistics Report, NCHS, DHHS Pub. No. (PHS)93-1120, Vol. 41, No. 7, Supplement, Jan. 7, 1993, Table 12

Chart 4.10

***Age-Specific Death Rates,
Ratio of Indians and
Alaska Natives (1989–
1991) to U.S. All Races
(1990)***

The age-specific death rate for American Indians and Alaska Natives (1989-1991) was 1.4 or more times the U.S. All Races rate (1990) for age groups 1 through 54. The Indian rate was less than the U.S. All Races rate for age groups over 64.

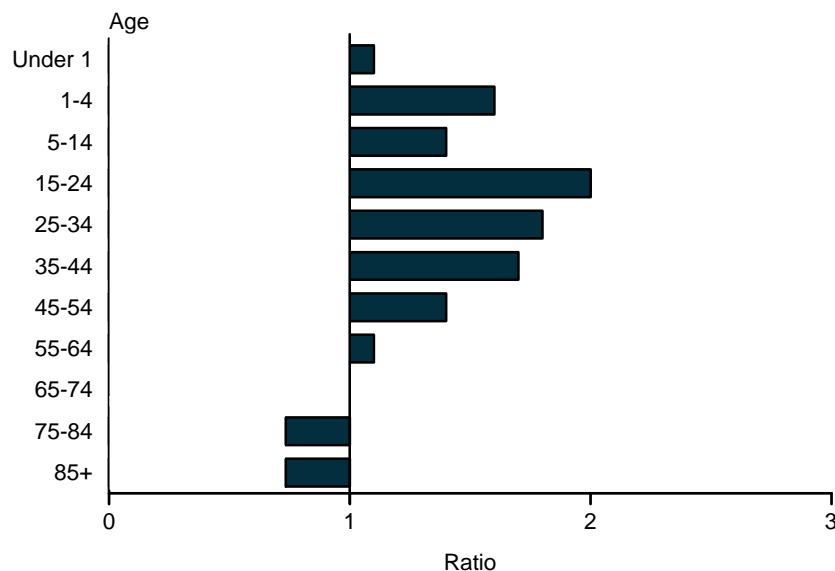


Chart 4.11

***Age-Specific Death Rates,
Ratio of Indians and
Alaska Natives (1989–
1991) to U.S. White
(1990)***

The age-specific death rate for American Indians and Alaska Natives (1989-1991) was about double the U.S. White rate (1990) for age groups 1 to 4 and 15 through 44. The Indian rate was less than the U.S. White rate for age groups over 64.

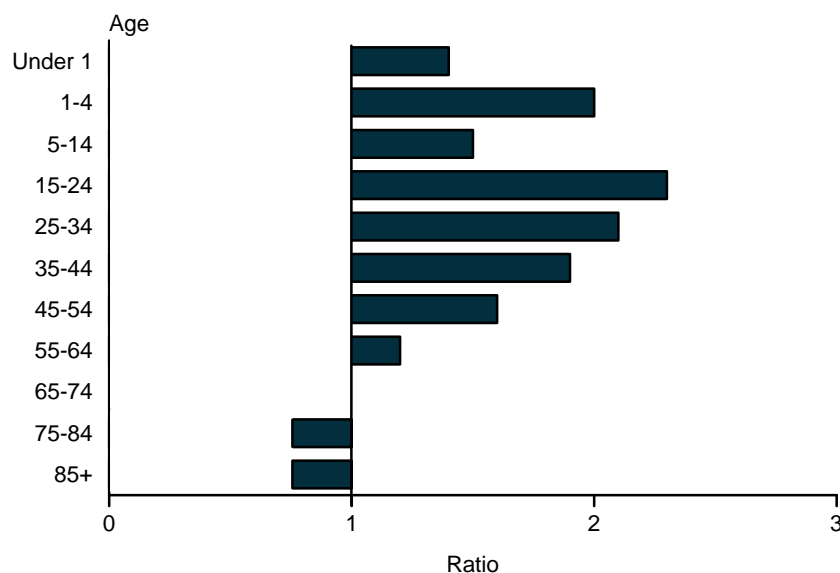


Table 4.10
Age-Specific Mortality
Rates

American Indians and
Alaska Natives, IHS Service
Area, 1989–1991, and
Selected U.S. Populations,
1990

Rate per 100,000 Population

Age Group	Indian and Alaska Native		U.S. Rate			Ratio American Indian and Alaska Native to:	
	Number	Rate	All Races	White	All Other	U.S. All Races	U.S. White
Under 1	1,038	1,085.9	971.9	795.5	1,646.5	1.1	1.4
1–4	251	73.2	46.8	41.1	69.3	1.6	1.8
5–14	259	33.1	24.0	22.3	31.3	1.4	1.5
15–24	1,280	199.3	99.2	89.7	139.9	2.0	2.2
25–34	1,545	252.5	139.2	119.3	236.4	1.8	2.1
35–44	1,693	369.2	223.2	192.8	389.8	1.7	1.9
45–54	1,901	664.3	473.4	427.2	758.7	1.4	1.6
55–64	2,661	1,347.1	1,196.9	1,129.6	1,675.6	1.1	1.2
65–74	3,287	2,555.9	2,648.6	2,573.1	3,301.9	1.0	1.0
75–84	3,142	5,055.0	6,007.2	5,963.6	6,434.3	0.8	0.8
85+	2,020	11,614.5	15,327.4	15,464.8	13,893.5	0.8	0.8

SOURCE: U.S. Data by Race: National Center for Health Statistics, HHS, Monthly Vital Statistics Report, Vol. 41, No. 7, Supplement Advance Report—Final Mortality Statistics, 1990, Table 9, and Final Mortality Statistics, 1990, NCHS Volume II, Part A, Table 1–10.

Chart 4.12
Deaths by Age

Of all American Indian and Alaska Native people who died during 1989–1991, 32 percent were under 45 years of age. This compared to 11 percent for the U.S. All Races population (1990).

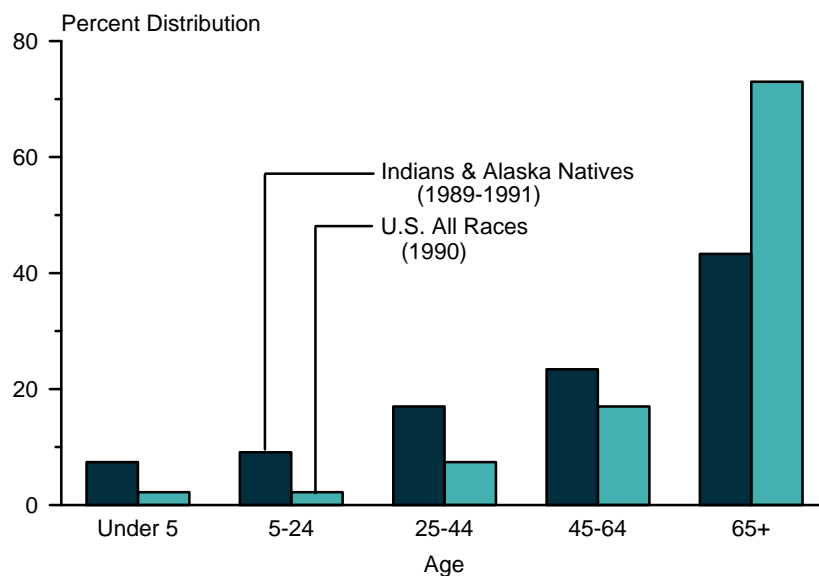


Chart 4.13
Deaths by Age and Race

23 percent of Black decedents and 9 percent of White decedents in 1990 were under 45 years of age.

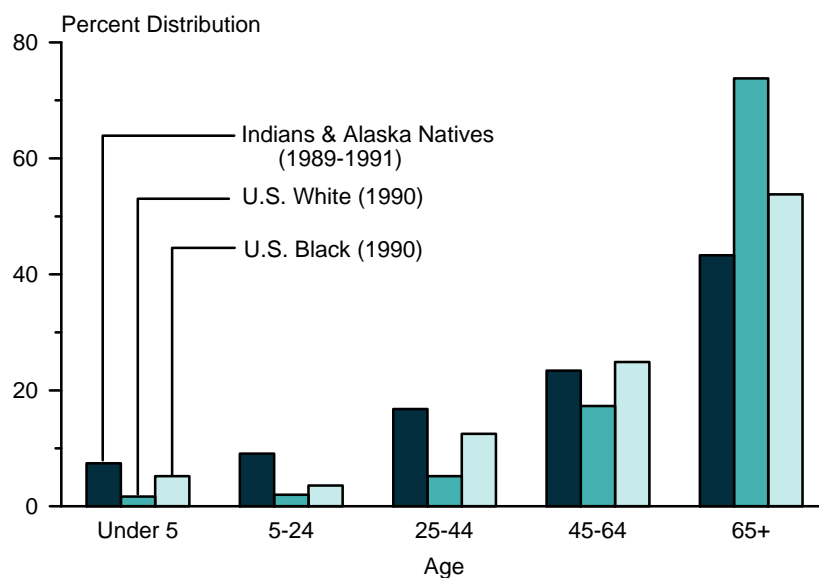


Chart 4.14
*Deaths by Age and Sex,
Indians and Alaska
Natives (1989–1991)*

37 percent of Indian male deaths (1989–1991) pertained to ages under 45. This compared with about 25 percent for Indian female deaths.

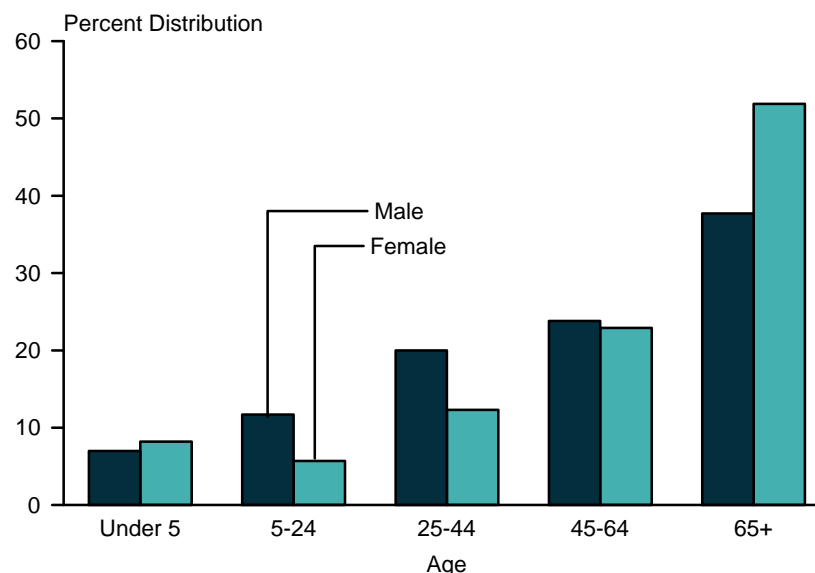


Table 4.12
*Number and Percent
Distribution of Deaths by
Age and Sex*

American Indians and Alaska Natives, IHS Service Area, 1989–1991, and Selected U.S. Populations, 1990

Age Group	American Indian and Alaska Native					
	Both Sexes		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
All Ages	19,084	100.0	11,183	100.0	7,901	100.0
Under 1	1,038	5.4	567	5.1	471	6.0
1 to 4	251	1.3	154	1.4	97	1.2
5 to 14	259	1.4	161	1.4	98	1.2
15 to 24	1,280	6.7	976	8.7	304	3.8
25 to 34	1,545	8.1	1,140	10.2	405	5.1
35 to 44	1,693	8.9	1,132	10.1	561	7.1
45 to 54	1,901	10.0	1,162	10.4	739	9.4
55 to 64	2,661	13.9	1,561	14.0	1,100	13.9
65 to 74	3,287	17.2	1,823	16.3	1,464	18.5
75 to 84	3,142	16.5	1,603	14.3	1,539	19.5
85 and over	2,020	10.6	900	8.0	1,120	14.2
Age Not Stated	7	0.0	4	0.0	3	0.0

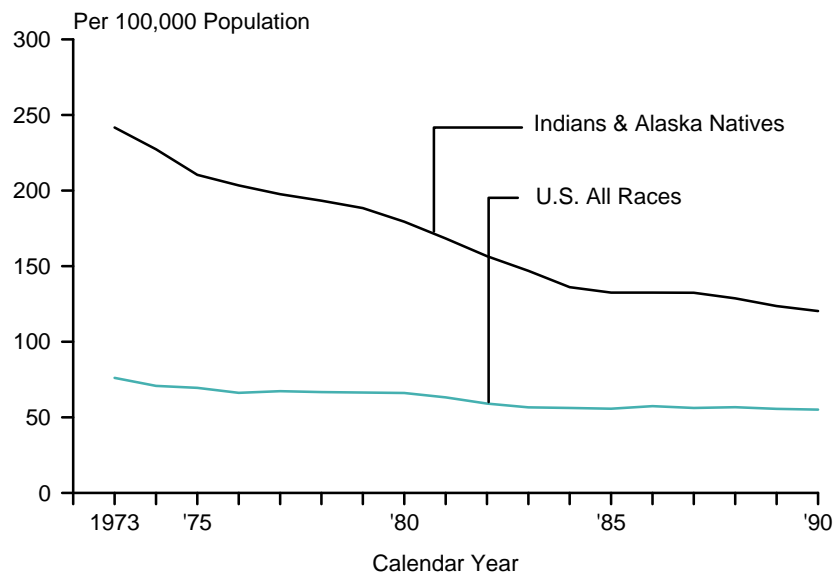
Age Group	United States		
	All Races	White	Black
	Number of Deaths, All Ages	Number of Deaths, All Ages	Number of Deaths, All Ages
Number of Deaths, All Ages	2,148,463	1,853,254	265,498
Percent Distribution, All Ages	100.0	100.0	100.0
Under 1	1.8	1.3	4.6
1 to 4	0.3	0.3	0.7
5 to 14	0.4	0.3	0.7
15 to 24	1.7	1.5	3.2
25 to 34	2.8	2.3	6.0
35 to 44	3.9	3.3	7.7
45 to 54	5.5	5.0	9.0
55 to 64	11.8	11.3	14.9
65 to 74	22.2	22.5	21.0
75 to 84	28.0	29.2	20.1
85 and over	21.6	23.0	12.1
Age Not Stated	0.0	0.0	0.1

NOTE: 0.0 Rounds to zero.

Chart 4.15***Age-Adjusted Injury and Poisoning Deaths***

The American Indian and Alaska Native age-adjusted death rate due to injury and poisoning (accidents, suicide, homicide, and other injuries) in 1989-1991 (120.3 deaths per 100,000 population) is about half of what it was in 1972-1974 (241.7).

However, the rate is over twice the U.S. All Races rate of 55.1 for 1990.

**Table 4.15*****Deaths and Mortality Rates due to Injury and Poisoning¹***

American Indians and Alaska Natives, IHS Service Area and U.S. All Races and White Populations, 1955-1991

Age-Adjusted Rate per 100,000 Population

Calendar Year(s)	Indian and Alaska Native		U.S. All Races		U.S. White	Ratio Indian to:	
	Number	Rate	Number	Rate	Rate	U.S. All Races	U.S. White
(1991)	1,397						
1989-1991 (1990)	1,349	120.3	150,211	55.1	50.8	2.2	2.4
1988-1990 (1989)	1,367	123.6	150,869	55.6	50.9	2.2	2.4
1987-1989 (1988)	1,391	128.7	152,572	56.7	52.7	2.3	2.4
1986-1988 (1987)	1,390	132.4	149,942	56.2	52.8	2.4	2.5
1985-1987 (1986)	1,375	132.5	151,032	57.4	54.1	2.3	2.4
1984-1986 (1985)	1,275	132.5	145,648	55.8	53.0	2.4	2.5
1983-1985 (1984)	1,254	136.1	145,012	56.3	53.7	2.4	2.5
1982-1984 (1983)	1,280	146.9	144,091	56.6	53.6	2.6	2.7
1981-1983 (1982)	1,351	156.6	147,894	59.2	55.9	2.6	2.8
1980-1982 (1981)	1,344	168.3	155,576	63.2	59.5	2.7	2.8
1979-1981 (1980)	1,418	179.2	160,551	66.1	61.9	2.7	2.9
1978-1980 (1979)	1,472	188.4	158,945	66.4	62.1	2.8	3.0
1977-1979 (1978)	1,383	193.3	157,450	66.7	62.6	2.9	3.1
1976-1978 (1977)	1,346	197.6	156,308	67.3	62.8	2.9	3.1
1975-1977 (1976)	1,321	203.4	151,913	66.2	63.8	3.1	3.2
1974-1976 (1975)	1,283	210.4	156,263	69.5	63.8	3.0	3.3
1973-1975 (1974)	1,229	227.3	156,931	70.8	64.6	3.2	3.5
1972-1974 (1973)	1,381	241.7	166,454	76.1	69.4	3.2	3.5
(1972)	1,241						
1954-1956 (1955)	2,273	200.3	117,650	69.2	51.9	2.9	3.9

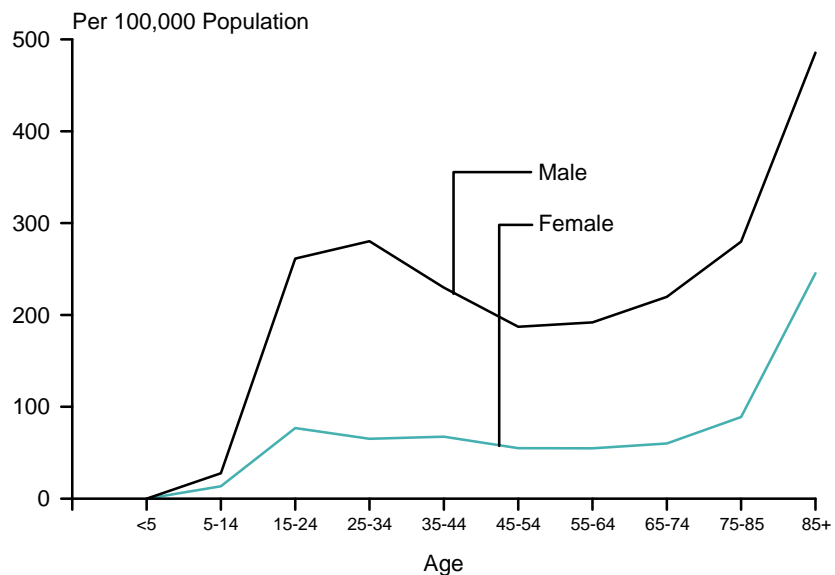
NOTE: Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single years specified.

¹ Includes the following deaths and ICD-9 codes; Motor vehicle accidents-E810-E825, Other accidents - E800-E807, E826-E949, Suicide - E950-E959, Homicide and legal intervention - E960-E978, Injury undetermined whether accidentally or purposely inflicted - E980-E989 and Injury resulting from operations of war - E990-E999.

Chart 4.16

***Injury and Poisoning
Death Rates by Age and
Sex, Indians and Alaska
Natives (1989-91)***

The age-specific death rate due to injury and poisoning for Indian males (1989-1991) was higher for all age groups in comparison with Indian females. The Indian male rate was over 200 deaths per 100,000 population for age groups 15 through 44 and 65 and over.

**Table 4.16**

***Injury and Poisoning¹
Mortality Rates by Age
and Sex***

American Indians and Alaska Natives, IHS Service Area, 1989-1991, and U.S. All Races and White Populations, 1990
Rate per 100,000 Population

Age Group	Indian and Alaska Native		
	Both Sexes	Male	Female
Under 5 years	—	—	—
5-14 years	20.7	27.6	13.5
15-24 years	170.8	261.3	76.8
25-34 years	170.3	280.2	65.2
35-44 years	145.9	229.7	67.5
45-54 years	118.1	187.1	54.9
55-64 years	118.5	191.8	54.8
65-74 years	130.6	219.7	60.0
75-84 years	165.7	279.7	88.9
85 years+	333.5	485.4	245.3

Age Group	U.S. All Races		
	Both Sexes	Male	Female
Under 5 years	29.0	33.3	24.5
5-14 years	12.8	16.4	8.9
15-24 years	78.2	123.0	31.6
25-34 years	71.7	113.9	29.7
35-44 years	60.2	94.4	26.8
45-54 years	53.1	80.8	26.8
55-64 years	56.4	85.2	30.7
65-74 years	69.2	104.0	42.1
75-84 years	130.6	197.5	90.7
85 years+	285.5	424.9	231.7

Age Group	U.S. White		
	Both Sexes	Male	Female
Under 5 years	19.3	22.3	15.9
5-14 years	11.7	15.0	8.1
15-24 years	71.3	109.4	31.0
25-34 years	63.8	100.2	26.7
35-44 years	55.1	84.9	25.2
45-54 years	50.3	75.1	26.1
55-64 years	54.3	81.0	30.0
65-74 years	67.5	101.0	41.1
75-84 years	130.3	197.4	90.2
85 years+	287.8	430.8	233.5

¹ Includes deaths with ICD-9 codes E800.0-E999.9.

NOTE: — Represents zero.

Chart 4.17
Age-Adjusted Accident
Death Rates

The age-adjusted accident death rate for American Indians and Alaska Natives dropped from 188.0 in 1972-1974 to 86.0 in 1989-1991, a decrease of 54 percent. However, the rate is over 2.6 times the U.S. All Races rate of 32.5 for 1990.

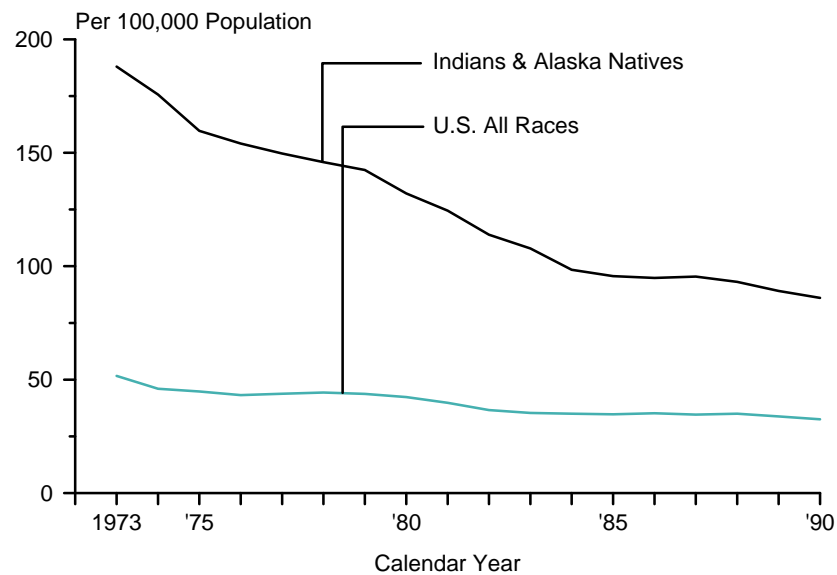


Table 4.17
Accident Deaths and Mortality Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1991

Age-Adjusted Rate per 100,000 Population

Calendar Year(s)	Indian and Alaska Native				U.S. All Races			U.S. White		
	Total Deaths	All Accidents	Motor Vehicle	Other	All Accidents	Motor Vehicle	Other	All Accidents	Motor Vehicle	Other
(1991)	988									
1989-1991 (1990)	970	86.0	48.4	37.6	32.5	18.5	14.0	31.8	18.6	13.0
1988-1990 (1989)	969	89.1	49.6	39.5	33.8	18.9	14.9	32.9	19.1	13.8
1987-1989 (1988)	1,012	93.1	52.2	41.0	35.0	19.7	15.3	34.1	20.0	14.1
1986-1988 (1987)	1,000	95.4	54.3	41.1	34.6	19.5	15.2	33.9	19.8	14.0
1985-1987 (1986)	983	94.8	54.2	40.7	35.2	19.4	15.7	34.5	19.8	14.7
1984-1986 (1985)	912	95.6	53.0	42.7	34.7	18.8	16.0	34.1	19.1	15.0
1983-1985 (1984)	920	98.4	53.2	45.2	35.0	19.1	15.9	34.6	19.6	15.0
1982-1984 (1983)	905	107.8	57.0	50.8	35.3	18.5	16.8	34.7	19.0	15.7
1981-1983 (1982)	999	113.9	62.1	51.9	36.6	19.3	17.3	36.1	19.8	16.3
1980-1982 (1981)	972	124.5	69.4	55.1	39.8	21.8	18.0	39.3	22.5	16.8
1979-1981 (1980)	1,058	132.1	75.2	56.8	42.3	22.9	19.5	41.5	23.4	18.0
1978-1980 (1979)	1,095	142.4	80.4	62.0	43.7	23.7	20.0	42.9	24.3	18.6
1977-1979 (1978)	1,070	145.9	82.4	63.5	44.3	23.4	20.9	43.3	23.8	19.5
1976-1978 (1977)	1,004	149.7	85.0	64.8	43.8	22.4	21.4	42.5	22.5	20.0
1975-1977 (1976)	994	154.1	86.9	67.2	43.2	21.5	21.7	41.8	21.5	20.3
1974-1976 (1975)	999	159.7	87.8	72.0	44.8	21.3	23.5	43.1	21.2	21.9
1973-1975 (1974)	921	175.7	97.3	78.4	46.0	21.8	24.2	44.3	21.7	22.6
1972-1974 (1973)	1,089	188.0	104.8	83.3	51.7	26.4	25.3	49.5	26.0	23.5
(1972)	987									
1954-1956 (1955)	714	184.0	97.6	90.3	54.3	24.6	29.7	52.2	24.3	27.9

NOTE: Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified.

Chart 4.18
Accident Death Rates by Age and Sex, Indians and Alaska Natives (1989-1991)

The age-specific death rate for accidents for Indian males (1989-1991) was higher for all age groups in comparison with Indian females. The Indian male rate was over 3 times the Indian female rate for age groups 25 through 84.

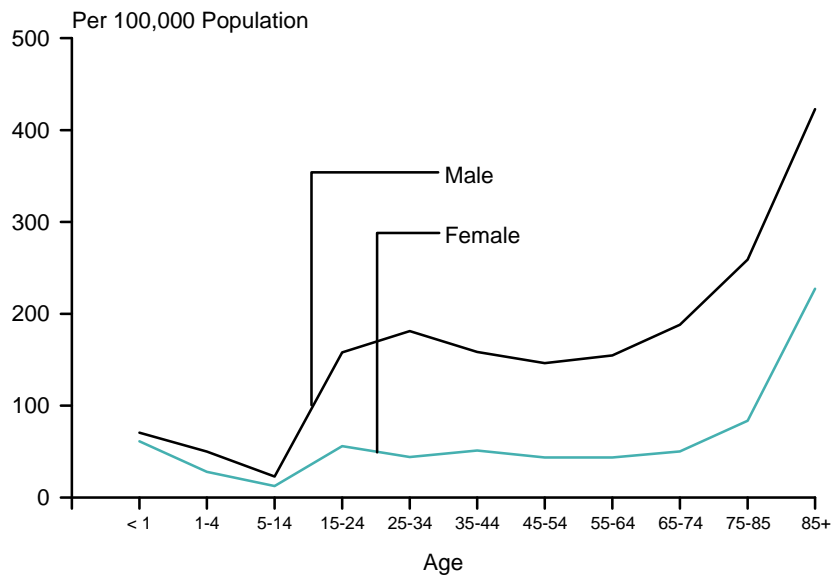


Table 4.18
Accident¹ Mortality Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1989-1991, and U.S. All Races and White Populations, 1990

Rate per 100,000 Population

Age Group	Indian and Alaska Native		
	Both Sexes	Male	Female
Under 1year	65.9	70.5	61.2
1-4 years	39.1	49.9	27.9
5-14 years	17.8	22.9	12.5
15-24 years	107.9	158.0	55.9
25-34 years	111.1	181.2	44.1
35-44 years	102.9	158.4	51.1
45-54 years	92.6	146.2	43.5
55-64 years	95.2	154.7	43.5
65-74 years	111.2	188.0	50.2
75-84 years	154.5	259.7	83.5
85 years+	299.0	422.7	227.2

Age Group	U.S. All Races		
	Both Sexes	Male	Female
Under 1year	23.6	25.2	21.8
1-4 years	17.3	20.8	13.7
5-14 years	10.4	13.5	7.2
15-24 years	43.9	65.9	20.8
25-34 years	37.0	57.9	16.1
35-44 years	31.3	48.7	14.3
45-54 years	29.4	43.7	15.8
55-64 years	34.3	49.8	20.4
65-74 years	46.6	64.6	32.5
75-84 years	100.3	134.0	80.2
85 years+	257.1	349.8	221.3

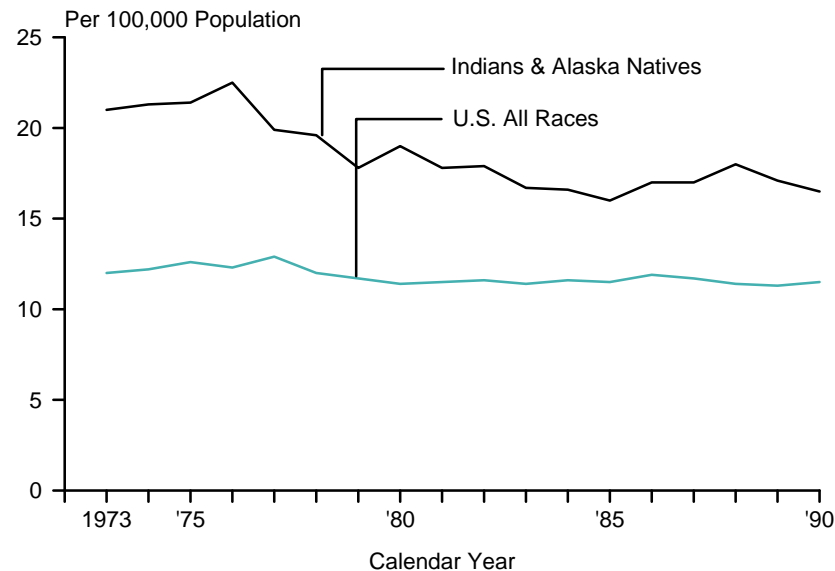
Age Group	U.S. White		
	Both Sexes	Male	Female
Under 1year	19.5	20.8	13.1
1-4 years	15.7	18.9	12.4
5-14 years	9.8	12.6	6.8
15-24 years	46.1	68.7	22.3
25-34 years	36.4	56.7	15.7
35-44 years	29.6	45.5	13.7
45-54 years	27.6	40.5	15.2
55-64 years	32.4	46.5	17.5
65-74 years	44.7	61.4	31.6
75-84 years	99.3	132.3	79.9
85 years+	259.9	353.1	224.5

¹ Includes deaths with ICD-9 codes E800-E949.

Chart 4.19
Age-Adjusted Suicide
Death Rates

The age-adjusted suicide death rate for American Indians and Alaska Natives has decreased 21 percent since 1972-1974. The Indian rate for 1989-1991 was 16.5 deaths per 100,000 population compared with the U.S. All Races rate of 11.5 for 1990, a ratio of 1.4.

Table 4.19
Suicide Deaths and
Mortality Rates



American Indians and
Alaska Natives, IHS Service
Area, and U.S. All Races
and White Populations,
1955-1991

Age-Adjusted Rate per 100,000
Population

Calendar Year(s)	Indian and Alaska Native		U.S. All Races		U.S. White Rate	Ratio Indian to:	
	Number	Rate	Number	Rate		U.S. All Races	U.S. White
(1991)	184						
1989-1991 (1990)	195	16.5	30,906	11.5	12.2	1.4	1.4
1988-1990 (1989)	192	17.1	30,232	11.3	12.0	1.5	1.4
1987-1989 (1988)	185	17.5	30,407	11.4	12.2	1.5	1.4
1986-1988 (1987)	187	17.0	30,796	11.7	12.5	1.5	1.4
1985-1987 (1986)	158	17.0	30,904	11.9	12.7	1.4	1.3
1984-1986 (1985)	172	16.0	29,453	11.5	12.3	1.4	1.3
1983-1985 (1984)	148	16.6	29,286	11.6	12.4	1.4	1.3
1982-1984 (1983)	161	16.7	28,295	11.4	12.2	1.5	1.4
1981-1983 (1982)	154	17.9	28,242	11.6	12.4	1.5	1.4
1980-1982 (1981)	157	17.8	27,596	11.5	12.2	1.5	1.5
1979-1981 (1980)	146	19.0	26,869	11.4	12.1	1.7	1.6
1978-1980 (1979)	162	17.8	27,204	11.7	12.4	1.5	1.4
1977-1979 (1978)	117	19.6	27,294	12.0	12.7	1.6	1.5
1976-1978 (1977)	161	19.9	28,681	12.9	13.6	1.5	1.5
1975-1977 (1976)	143	22.5	26,832	12.3	12.9	1.8	1.7
1974-1976 (1975)	139	21.4	27,063	12.6	13.3	1.7	1.6
1973-1975 (1974)	122	21.3	25,683	12.2	12.8	1.7	1.7
1972-1974 (1973)	116	21.0	25,118	12.0	12.6	1.8	1.7
(1972)	113		25,004				
1954-1956 (1955)	39	11.9	16,760	9.9	10.4	1.2	1.1

NOTE: Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified.

Chart 4.20
Suicide Death Rates by Age and Sex, Indians and Alaska Natives (1989–1991)

The age-specific suicide death rate (1989–1991) for Indian males was higher for all age groups in comparison with Indian females. The Indian male rate was at its highest (over 52.0 deaths per 100,000 population) for age groups 15 through 34.

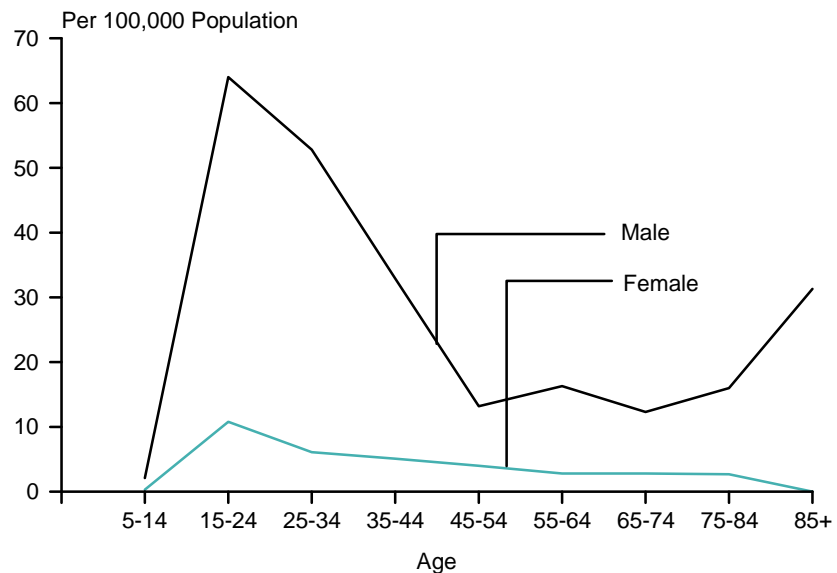


Table 4.20
Suicide¹ Mortality Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1989–1991, and U.S. All Races and White Populations, 1990

Rate per 100,000 Population

Age Group	Indian and Alaska Native		
	Both Sexes	Male	Female
Under 5 years	—	—	—
5–14 years	1.3	2.3	0.3
15–24 years	37.5	63.3	10.8
25–34 years	28.9	52.8	6.1
35–44 years	18.5	32.9	5.1
45–54 years	8.4	13.2	4.0
55–64 years	9.1	16.3	2.8
65–74 years	7.0	12.3	2.8
75–84 years	8.0	16.0	2.7
85 years+	11.5	31.3	—

Age Group	U.S. All Races		
	Both Sexes	Male	Female
Under 5 years	—	—	—
5–14 years	0.8	1.0	0.4
15–24 years	13.2	22.0	3.9
25–34 years	15.2	24.8	5.6
35–44 years	15.3	23.9	6.8
45–54 years	14.8	23.2	6.9
55–64 years	16.0	25.7	7.4
65–74 years	17.9	32.2	6.7
75–84 years	24.9	56.1	6.3
85 years+	22.2	65.9	5.4

Age Group	U.S. White		
	Both Sexes	Male	Female
Under 5 years	—	—	—
5–14 years	0.8	1.1	0.4
15–24 years	14.0	23.2	4.1
25–34 years	15.9	25.6	5.9
35–44 years	16.4	25.3	7.4
45–54 years	16.0	24.7	7.4
55–64 years	17.3	27.5	7.9
65–74 years	19.1	34.2	7.1
75–84 years	26.7	60.2	6.7
85 years+	23.3	70.4	5.3

¹ Includes deaths with ICD-9 codes E950–E959.

NOTE: — Represents zero

Chart 4.21
Age-Adjusted Homicide
Death Rates

The age-adjusted homicide death rate for American Indians and Alaska Natives has decreased 37 percent since 1972-1974. In 1989-1991, the Indian rate was 15.3 deaths per 100,000 population compared with 10.2 for the U.S. All Races population in 1990, a ratio of 1.5 to 1.

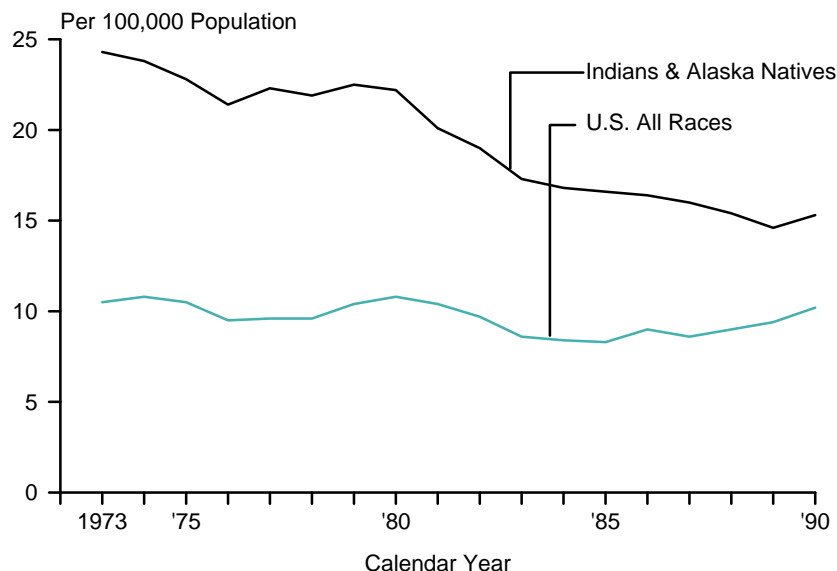


Table 4.21
Homicide Deaths and
Mortality Rates

American Indians and
Alaska Natives, IHS Service
Area, and U.S. All Races
and White Populations,
1955-1991

Age-Adjusted Rate per 100,000
Population

Calendar Year(s)	Indian and Alaska Native		U.S. All Races		U.S. White Rate	Ratio Indian to:	
	Number	Rate	Number	Rate		U.S. All Races	U.S. White
(1991)	199						
1989-1991 (1990)	153	15.3	24,932	10.2	5.9	1.5	2.6
1988-1990 (1989)	177	14.6	22,909	9.4	5.4	1.6	2.7
1987-1989 (1988)	160	15.4	22,032	9.0	5.3	1.7	2.9
1986-1988 (1987)	161	16.0	21,103	8.6	5.3	1.9	3.0
1985-1987 (1986)	184	16.4	21,731	9.0	5.6	1.8	2.9
1984-1986 (1985)	151	16.4	19,893	8.3	5.4	2.0	3.0
1983-1985 (1984)	146	16.8	19,796	8.4	5.5	2.0	3.1
1982-1984 (1983)	171	17.3	20,191	8.6	5.6	2.0	3.1
1981-1983 (1982)	145	19.0	22,358	9.7	6.3	2.0	3.0
1980-1982 (1981)	165	20.1	23,646	10.4	6.6	1.9	3.0
1979-1981 (1980)	172	22.2	24,278	10.8	6.9	2.1	3.2
1978-1980 (1979)	164	22.5	22,550	10.4	6.5	2.2	3.5
1977-1979 (1978)	158	21.9	20,432	9.6	6.0	2.3	3.7
1976-1978 (1977)	139	22.3	19,968	9.6	5.9	2.3	3.8
1975-1977 (1976)	144	21.4	19,554	9.5	5.5	2.3	3.9
1974-1976 (1975)	115	22.8	21,310	10.5	6.1	2.2	3.7
1973-1975 (1974)	136	23.8	21,465	10.8	6.0	2.2	4.0
1972-1974 (1973)	139	24.3	20,465	10.5	5.7	2.3	4.3
(1972)	93		19,638				
1954-1956 (1955)	77	23.8	7,418	4.8	2.4	5.0	9.9

NOTE: Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified.

Chart 4.22
Homicide Death Rates by
Age and Sex, Indians and
Alaska Natives
(1989–1991)

The age-specific homicide death rate (1989-1991) for Indian males was higher for all age groups except under 1 and 75 to 84 in comparison with Indian females. The Indian male rate exceeded 34.0 deaths per 100,000 population for age groups 15 through 44.

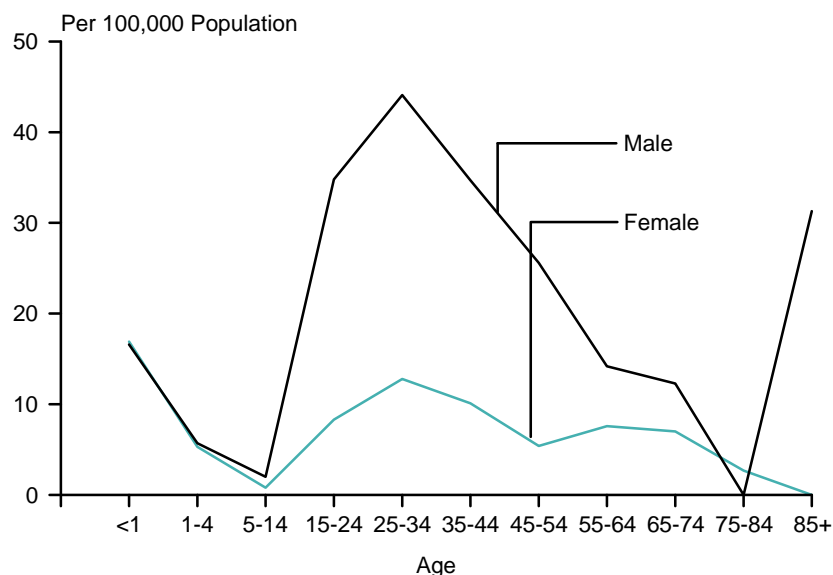


Table 4.22
Homicide¹ Mortality
Rates by Age and Sex

American Indians and
 Alaska Natives, IHS Service
 Area, 1989–1991, and U.S.
 All Races and White
 Populations, 1990

Rate per 100,000 Population

Age Group	Indian and Alaska Native		
	Both Sexes	Male	Female
Under 1 year	16.7	16.6	16.9
1–4 years	5.5	5.7	5.3
5–14 years	1.4	2.0	0.8
15–24 years	21.8	34.8	8.3
25–34 years	26.6	44.1	12.8
35–44 years	22.0	34.7	10.1
45–54 years	15.0	25.6	5.4
55–64 years	10.6	14.2	7.6
65–74 years	9.3	12.3	7.0
75–84 years	1.6	—	2.7
85 years+	11.5	31.3	—

Age Group	U.S. All Races		
	Both Sexes	Male	Female
Under 1 year	8.4	8.8	8.0
1–4 years	2.6	2.7	2.4
5–14 years	1.5	1.6	1.2
15–24 years	19.9	33.0	6.3
25–34 years	17.7	28.3	7.2
35–44 years	11.8	19.0	4.8
45–54 years	7.6	12.1	3.2
55–64 years	5.0	8.0	2.3
65–74 years	3.8	5.7	2.2
75–84 years	4.3	5.7	3.4
85 years+	4.6	6.7	3.8

Age Group	U.S. White		
	Both Sexes	Male	Female
Under 1 year	5.8	6.4	5.1
1–4 years	1.6	1.7	1.4
5–14 years	1.0	1.0	0.8
15–24 years	10.0	15.6	4.0
25–34 years	9.8	15.2	4.3
35–44 years	7.4	11.4	3.2
45–54 years	5.4	8.3	2.6
55–64 years	3.6	5.5	1.8
65–74 years	2.8	4.1	1.8
75–84 years	3.2	3.8	2.7
85 years+	3.2	4.8	2.5

¹ Includes deaths with ICD-9 codes E960–E978.

NOTE: — Represents zero.

Chart 4.23
Other Injury Deaths and Mortality Rates

The age-adjusted death rate due to other injuries (undetermined injury and war injury) has decreased 70 percent since 1972-1974. In 1989-1991, the Indian rate was 2.5 deaths per 100,000 population compared with 0.9 for the U.S. All Races population in 1990, nearly 3 times as great.

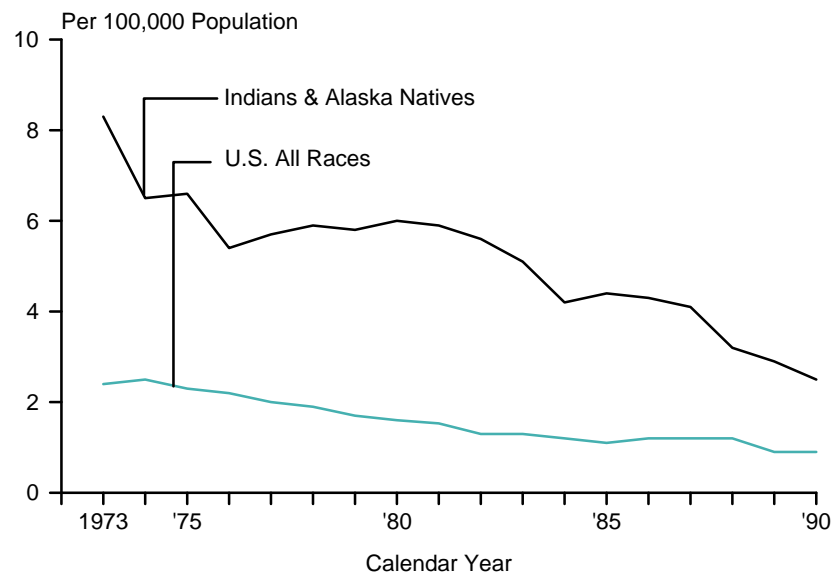


Table 4.23
Deaths and Mortality Rates due to Other Injuries ^{1 2}

American Indians and Alaska Natives, IHS Service Area and U.S. All Races and White Populations, 1972-1991

Age-Adjusted Rate per 100,000 Population

Calendar Year(s)	Indian and Alaska Native		U.S. All Races			U.S. White Combined Rate	Ratio Indian to:	
	Number of Deaths		Number of Deaths				U.S. All Races	U.S. White
	Undetermined Injury and War Injury	Combined Rate	Undetermined Injury	War Injury	Combined Rate			
(1991)	26							
1989–1991 (1990)	31	2.5	2,376	14	0.9	0.8	2.8	3.1
1988–1990 (1989)	28	2.9	2,686	14	0.9	0.8	3.2	3.6
1987–1989 (1988)	34	3.2	3,018	15	1.2	1.0	2.7	3.2
1986–1988 (1987)	41	4.1	3,011	12	1.2	1.0	3.4	4.1
1985–1987 (1986)	50	4.3	3,108	12	1.2	1.1	3.6	3.9
1984–1986 (1985)	39	4.4	2,826	19	1.1	1.0	4.0	4.4
1983–1985 (1984)	39	4.2	2,996	23	1.2	1.1	3.5	3.8
1982–1984 (1983)	40	5.1	3,104	13	1.3	1.1	3.9	4.6
1981–1983 (1982)	52	5.6	3,201	11	1.3	1.2	4.3	4.7
1980–1982 (1981)	46	5.9	3,614	16	1.5	1.3	3.9	4.5
1979–1981 (1980)	39	6.0	3,663	23	1.6	1.4	3.8	4.3
1978–1980 (1979)	49	5.8	3,860	17	1.7	1.5	2.4	2.7
1977–1979 (1978)	37	5.9	4,144	19	1.9	1.6	3.1	3.7
1976–1978 (1977)	38	5.7	4,433	24	2.0	1.6	2.9	3.6
1975–1977 (1976)	39	5.4	4,744	22	2.2	1.8	2.5	2.2
1974–1976 (1975)	29	6.6	4,838	22	2.3	1.9	2.9	3.5
1973–1975 (1974)	50	6.5	5,149	12	2.5	2.1	2.6	3.1
1972–1974 (1973)	35 ³	8.3	5,030	20	2.4	2.0	3.5	4.2
(1972)	46							

NOTE: Data were first available for these cause of death categories in 1969, through use of the ICD-8 coding system. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified.

¹ Includes deaths with ICD-9 codes E980-E989; Injury undetermined whether accidentally or purposely inflicted.

² Includes deaths with ICD-9 codes E990-E999; Injury resulting from operations of war.

³ In 1973 there was one American Indian injury death resulting from operations of war. For each of the other years shown above there were no American Indian injury deaths due to this cause.

Chart 4.24
Other Injury Death Rates
by Age and Sex, Indians
and Alaska Natives
(1989-1991)

The age-specific death rate due to other injuries (1989-1991) for Indian males was higher for all age groups through age 84 in comparison with Indian females. Indian females over 84 years old, however, had the highest age-specific rate, 18.2.

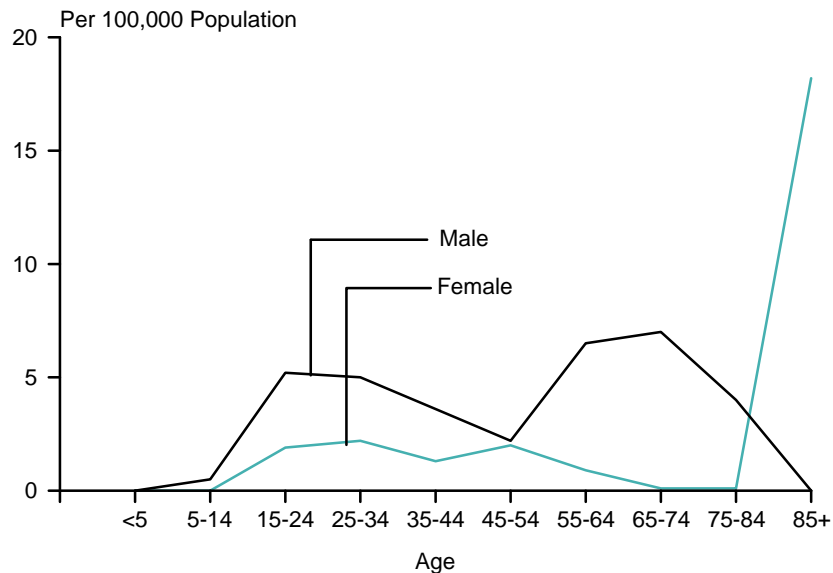


Table 4.24
Other Injury ¹ Mortality
Rates by Age and Sex

American Indians and
 Alaska Natives, IHS Service
 Area, 1989-1991, and U.S.
 All Races and White
 Populations, 1990

Rate per 100,000 Population

Age Group	Indian and Alaska Native		
	Both Sexes	Male	Female
Under 5 years	—	—	—
5-14 years	0.3	0.5	—
15-24 years	3.6	5.2	1.9
25-34 years	3.6	5.0	2.2
35-44 years	2.4	3.6	1.3
45-54 years	2.1	2.2	2.0
55-64 years	3.5	6.5	0.9
65-74 years	3.1	7.0	—
75-84 years	1.6	4.0	—
85 years+	11.5	—	18.2

Age Group	U.S. All Races		
	Both Sexes	Male	Female
Under 5 years	0.4	0.5	0.4
5-14 years	0.1	0.2	0.1
15-24 years	0.8	1.3	0.3
25-34 years	1.5	2.3	0.7
35-44 years	1.5	2.3	0.8
45-54 years	1.0	1.3	0.7
55-64 years	0.8	1.2	0.5
65-74 years	0.7	1.0	0.4
75-84 years	0.8	1.3	0.5
85 years+	1.4	1.9	1.3

Age Group	U.S. White		
	Both Sexes	Male	Female
Under 5 years	0.2	0.2	0.1
5-14 years	0.1	0.2	0.0
15-24 years	0.8	1.1	0.3
25-34 years	1.4	2.1	0.5
35-44 years	1.4	2.1	0.7
45-54 years	1.0	1.1	0.7
55-64 years	0.7	1.0	0.4
65-74 years	0.7	0.9	0.4
75-84 years	0.8	1.3	0.4
85 years+	1.3	1.9	1.0

¹ Includes deaths with ICD-9 codes E980.0-E999.9.

NOTE: — Represents zero. 0.0 Rounds to zero.

Chart 4.25
Age-Adjusted Alcoholism
Death Rates

The age-adjusted alcoholism death rate for American Indians and Alaska Natives has decreased 36 percent since 1979-1981. In 1989-1991, it was 37.6 deaths per 100,000 population or 5.3 times the U.S. All Races rate of 7.1 in 1990.

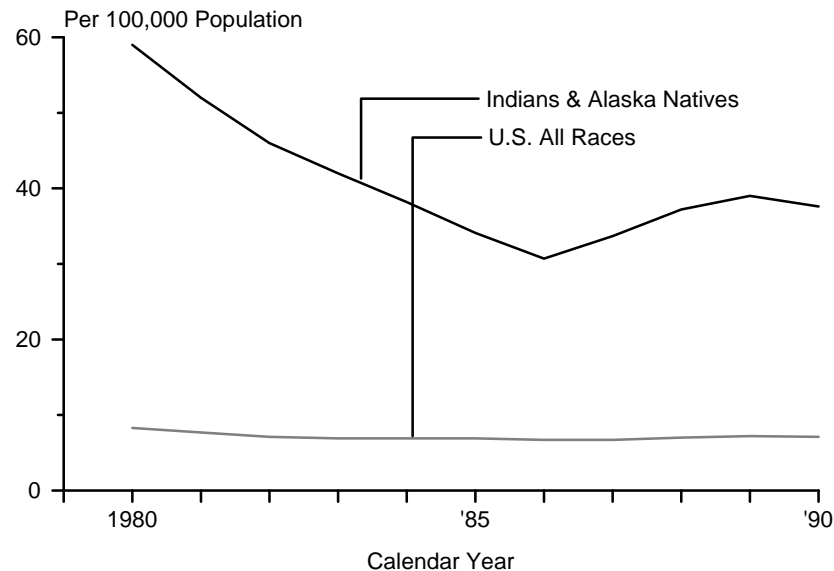


Table 4.25
Alcoholism Deaths and
Mortality Rates

American Indians and
Alaska Natives, IHS Service
Area, and U.S. All Races
and White Populations,
1979-1991

Age-Adjusted Rate per 100,000
Population

Calendar Year(s)	Indian and Alaska Native		U.S. All Races		U.S. White Rate	Ratio American Indian to:	
	Number	Rate	Number	Rate		U.S. All Races	U.S. White
(1991)	360						
1989-1991 (1990)	345	37.6	19,592	7.1	6.1	5.3	6.2
1988-1990 (1989)	374	39.0	19,619	7.2	6.1	5.4	6.4
1987-1989 (1988)	372	37.2	18,715	7.0	5.9	5.3	6.3
1986-1988 (1987)	260	33.7	17,656	6.7	5.7	5.0	5.9
1985-1987 (1986)	260	30.7	17,283	6.7	5.6	4.6	5.5
1984-1986 (1985)	272	34.1	17,609	6.9	5.8	4.9	5.9
1983-1985 (1984)	300	38.2	17,452	6.9	5.9	5.5	6.5
1982-1984 (1983)	291	42.0	17,237	6.9	5.9	6.1	7.1
1981-1983 (1982)	286	46.0	17,334	7.1	6.1	6.5	7.5
1980-1982 (1981)	344	52.0	18,469	7.7	6.5	6.8	8.0
1979-1981 (1980)	368	59.0	19,560	8.3	6.9	7.1	8.6
(1979)	377						

NOTE: Includes causes of death previously classified as alcoholism deaths (alcoholic psychosis—291, alcohol dependence syndrome—303, and chronic liver disease and cirrhosis, specified as alcoholic, 571.0-571.3), plus deaths caused by alcohol abuse—305.0, alcoholic cardiomyopathy—425.5, alcoholic gastritis—535.3, excessive blood level of alcohol—790.3, and accidental poisoning by alcohol—E860.0 and E860.1. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified.

Chart 4.26
Alcoholism Death Rates
by Age and Sex, Indians
and Alaska Natives
(1989–1991)

The age-specific alcoholism death rate (1989–1991) for Indian males was higher for all age groups in comparison with Indian females. The Indian male rate exceeded 107.0 deaths per 100,000 population for age groups 45 through 74.

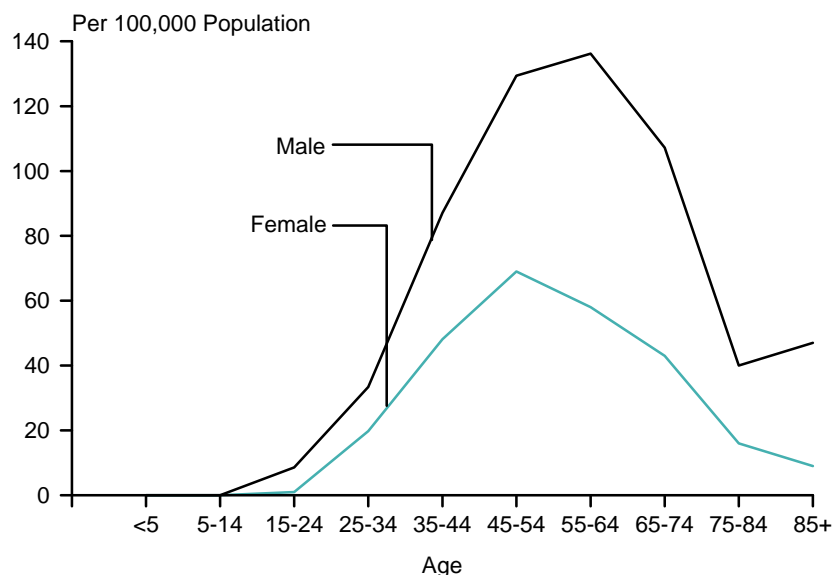


Table 4.26
Alcoholism¹ Mortality
Rates by Age and Sex

American Indians and
Alaska Natives, IHS Service
Area, 1989–1991, and U.S.
All Races and White
Populations, 1990

Rate per 100,000 Population

Age Group	Indian and Alaska Native		
	Both Sexes	Male	Female
Under 5 years	—	—	—
5–14 years	—	—	—
15–24 years	4.8	8.6	1.0
25–34 years	26.5	33.4	19.8
35–44 years	66.9	87.1	48.1
45–54 years	97.9	129.4	69.0
55–64 years	94.2	136.2	57.7
65–74 years	71.5	107.2	43.2
75–84 years	25.7	40.0	16.2
85 years+	23.0	47.0	9.1

Age Group	U.S. All Races		
	Both Sexes	Male	Female
Under 5 years	0.0	0.0	—
5–14 years	0.0	0.0	0.0
15–24 years	0.3	0.5	0.1
25–34 years	2.8	3.9	1.7
35–44 years	10.2	15.6	5.0
45–54 years	17.8	28.0	8.1
55–64 years	23.7	38.3	10.7
65–74 years	20.0	33.5	9.6
75–84 years	11.2	22.0	4.7
85 years+	4.7	12.4	1.7

Age Group	U.S. White		
	Both Sexes	Male	Female
Under 5 years	0.0	0.0	—
5–14 years	0.0	0.0	0.0
15–24 years	0.3	0.5	0.0
25–34 years	2.2	3.1	1.2
35–44 years	8.2	12.8	3.5
45–54 years	14.6	22.9	6.4
55–64 years	21.4	34.4	9.4
65–74 years	19.0	31.4	9.1
75–84 years	10.9	21.5	4.5
85 years+	4.4	11.7	1.6

¹ Includes deaths with ICD-9 codes 291, 303, 305.0, 425.5, 535.3, 571.0–571.3, 790.3, and E860.0–E860.1.

NOTE: — Represents zero. 0.0 Rounds to zero.

Chart 4.27
Age-Adjusted Malignant Neoplasm Death Rates

The age-adjusted malignant neoplasm death rate for American Indians and Alaska Natives hit a low in 1977-1979 of 80.2 deaths per 100,000 population, but has generally increased since then. In 1989-1991, the Indian rate was 70 percent of the U.S. All Races rate (1990), 94.5 compared with 135.0.

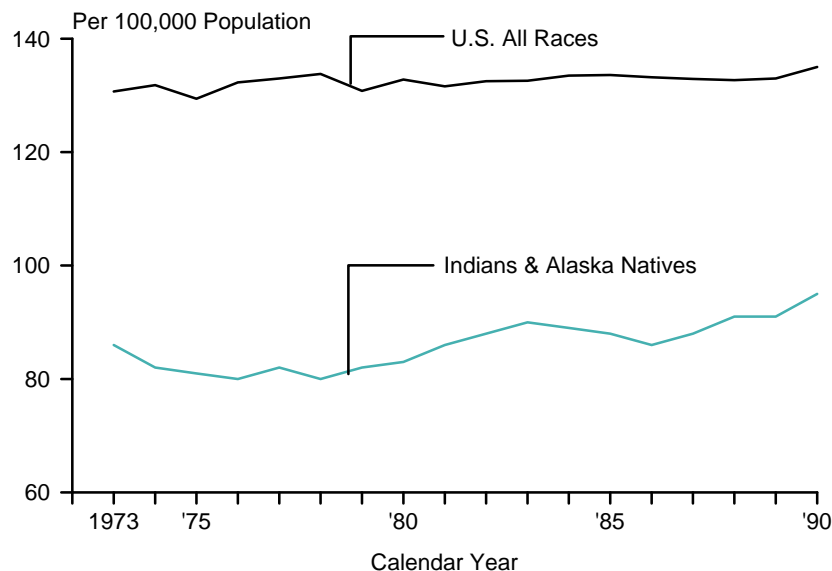


Table 4.27
Malignant Neoplasm Deaths and Mortality Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1991

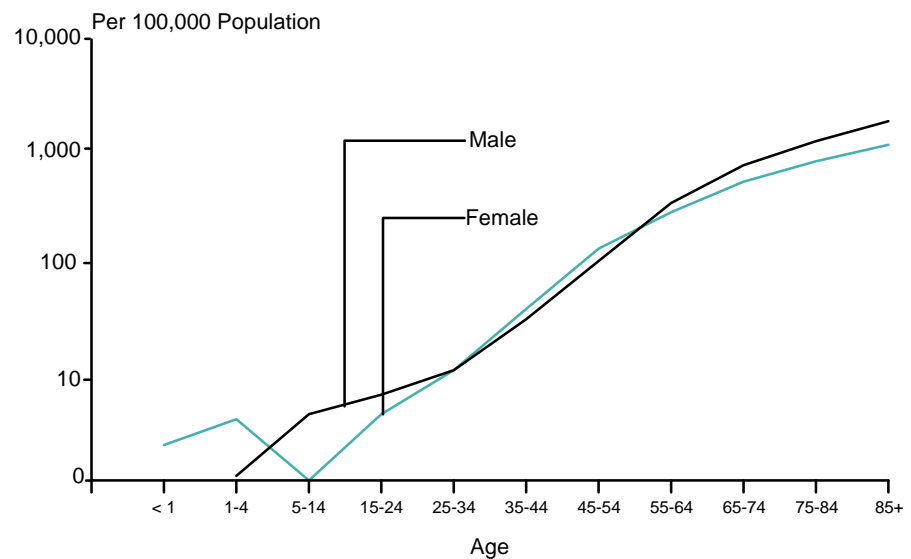
Age-Adjusted Rate per 100,000 Population

Calendar Year(s)	Indian and Alaska Native		U.S. All Races		U.S. White Rate	Ratio Indian to:	
	Number	Rate	Number	Rate		U.S. All Races	U.S. White
(1991)	1,021						
1989-1991 (1990)	859	94.5	505,322	135.0	131.5	0.7	0.7
1988-1990 (1989)	913	91.1	496,152	133.0	130.2	0.7	0.7
1987-1989 (1988)	831	90.9	485,048	132.7	130.0	0.7	0.7
1986-1988 (1987)	768	87.6	476,927	132.9	130.1	0.7	0.7
1985-1987 (1986)	756	85.8	469,376	133.2	130.4	0.6	0.7
1984-1986 (1985)	714	88.1	461,563	133.6	130.7	0.7	0.7
1983-1985 (1984)	712	88.8	453,492	133.5	130.2	0.7	0.7
1982-1984 (1983)	662	89.6	442,986	132.6	129.4	0.7	0.7
1981-1983 (1982)	617	87.5	433,795	132.5	129.4	0.7	0.7
1980-1982 (1981)	578	86.3	422,094	131.6	128.5	0.7	0.7
1979-1981 (1980)	567	82.7	416,509	132.8	129.6	0.6	0.6
1978-1980 (1979)	480	81.7	403,395	130.8	130.2	0.6	0.6
1977-1979 (1978)	503	80.2	396,992	133.8	130.8	0.6	0.6
1976-1978 (1977)	456	82.4	386,686	133.0	130.0	0.6	0.6
1975-1977 (1976)	441	80.3	377,312	132.3	129.5	0.6	0.6
1974-1976 (1975)	395	81.4	365,693	129.4	128.1	0.6	0.6
1973-1975 (1974)	403	82.2	360,472	131.8	129.0	0.6	0.6
1972-1974 (1973)	385	85.6	351,055	130.7	127.7	0.7	0.7
(1972)	354		345,618				
1954-1956 (1955)	296	95.0	240,681	125.8	125.8	0.8	0.8

NOTE: Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified.

Chart 4.28***Malignant Neoplasm
Death Rates by Age and
Sex, Indians and Alaska
Natives (1989-91)***

The age-specific malignant neoplasm death rate (1989-1991) for Indian males was greater for age groups 5 through 34 and 55 and over, in comparison with Indian females. The rates for Indian males and females increased with age beginning with age 5.

**Table 4.28*****Malignant Neoplasm¹
Mortality Rates by Age
and Sex***

American Indians and
Alaska Natives, IHS Service
Area, 1989-1991, and U.S.
All Races and White
Populations, 1990

Rate per 100,000 Population

Age Group	Indian and Alaska Native		
	Both Sexes	Male	Female
Under 1	1.0	—	2.1
1-4 years	2.3	1.1	3.6
5-14 years	2.3	3.5	1.0
15-24 years	4.8	5.5	4.1
25-34 years	10.1	10.4	9.9
35-44 years	32.9	29.3	36.3
45-54 years	112.9	97.9	126.6
55-64 years	298.2	329.1	271.3
65-74 years	606.5	724.0	513.2
75-84 years	952.4	1,198.7	786.5
85 years+	1,368.4	1,816.2	1,108.6

Age Group	U.S. All Races		
	Both Sexes	Male	Female
Under 1	2.3	2.4	2.2
1-4 years	3.5	3.7	3.2
5-14 years	3.1	3.5	2.8
15-24 years	4.9	5.7	4.1
25-34 years	12.6	12.6	12.6
35-44 years	43.3	38.5	48.2
45-54 years	158.9	162.7	155.7
55-64 years	449.6	533.4	375.6
65-74 years	872.3	1,123.1	677.8
75-84 years	1,348.5	1,915.6	1,010.9
85 years+	1,752.9	2,740.7	1,372.3

Age Group	U.S. White		
	Both Sexes	Male	Female
Under 1	2.2	2.3	2.1
1-4 years	3.5	3.7	3.2
5-14 years	3.2	3.5	2.8
15-24 years	5.0	5.7	4.0
25-34 years	12.1	12.3	11.8
35-44 years	41.1	35.8	46.3
45-54 years	150.6	150.0	151.1
55-64 years	435.4	508.7	368.8
65-74 years	858.7	1,091.4	675.4
75-84 years	1,338.4	1,884.3	1,012.3
85 years+	1,742.3	2,716.0	1,372.5

¹ Includes deaths with ICD-9 codes 140-208.

NOTE: — Represents zero.

Chart 4.29
Age-Adjusted
Tuberculosis Death Rates

The age-adjusted tuberculosis death rate for American Indians and Alaska Natives has dropped from 10.5 deaths per 100,000 population in 1972-1974 to 2.7 in 1989-1991, a decrease of 74 percent. The Indian rate is still 5.4 times the U.S. All Races rate of 0.5 for 1990.

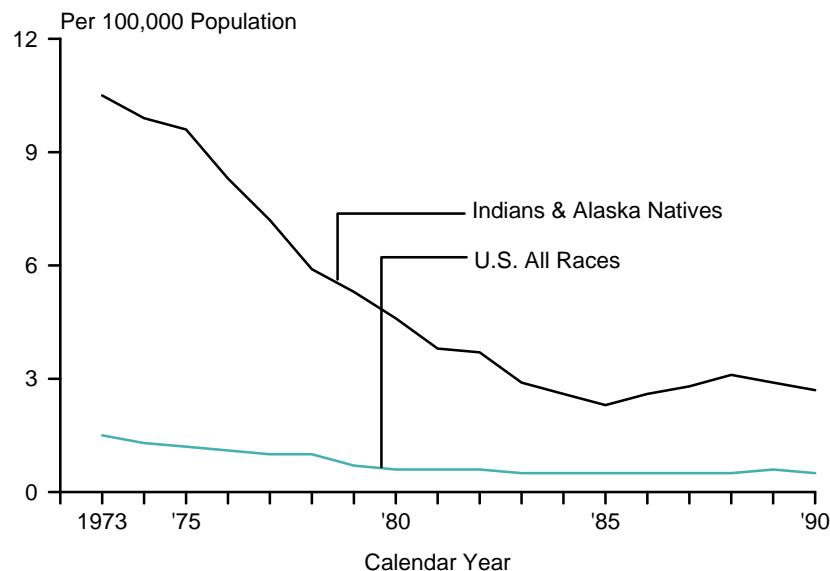


Table 4.29
Tuberculosis Deaths and
Mortality Rates

American Indians and
Alaska Natives, IHS Service
Area, and U.S. All Races
and White Populations,
1955-1991

Age-Adjusted Rate per 100,000
Population

Calendar Year(s)	Indian and Alaska Native		U.S. All Races		U.S. White Rate	Ratio Indian to:	
	Number	Rate	Number	Rate		U.S. All Races	U.S. White
(1991)	25						
1989-1991 (1990)	24	2.7	1,810	0.5	0.3	5.4	9.0
1988-1990 (1989)	33	2.9	1,970	0.6	0.3	4.8	9.7
1987-1989 (1988)	25	3.1	1,921	0.5	0.3	6.2	10.3
1986-1988 (1987)	28	2.8	1,755	0.5	0.3	5.6	9.3
1985-1987 (1986)	24	2.6	1,782	0.5	0.3	5.2	8.7
1984-1986 (1985)	18	2.3	1,752	0.5	0.3	4.6	7.7
1983-1985 (1984)	17	2.6	1,729	0.5	0.3	5.2	8.7
1982-1984 (1983)	30	2.9	1,779	0.5	0.3	5.8	9.7
1981-1983 (1982)	22	3.7	1,807	0.6	0.4	6.2	9.3
1980-1982 (1981)	30	3.8	1,937	0.6	0.4	6.3	9.5
1979-1981 (1980)	31	4.6	1,978	0.6	0.4	7.7	11.5
1978-1980 (1979)	33	5.3	2,007	0.7	0.4	7.6	13.3
1977-1979 (1978)	40	5.9	2,914	1.0	0.7	5.9	8.4
1976-1978 (1977)	33	7.2	2,968	1.0	0.7	7.2	10.3
1975-1977 (1976)	48	8.3	3,130	1.1	0.8	7.5	10.4
1974-1976 (1975)	53	9.6	3,333	1.2	0.9	8.0	12.0
1973-1975 (1974)	48	9.9	3,513	1.3	0.9	7.6	11.0
1972-1974 (1973)	45	10.5	3,875	1.5	1.1	7.0	9.5
(1972)	50		4,376				
1954-1956 (1955)	253	57.9	14,940	8.4	6.2	6.9	9.3

NOTE: Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified.

Chart 4.30
Age-Adjusted Diabetes Mellitus Death Rates

The age-adjusted diabetes mellitus death rate for American Indians and Alaska Natives is slightly higher today than it was in 1972-1974 when it was 28.1 deaths per 100,000 population. In 1989-1991, the Indian rate of 29.7 was 2.5 times the U.S. All Races rate of 11.7 in 1990.

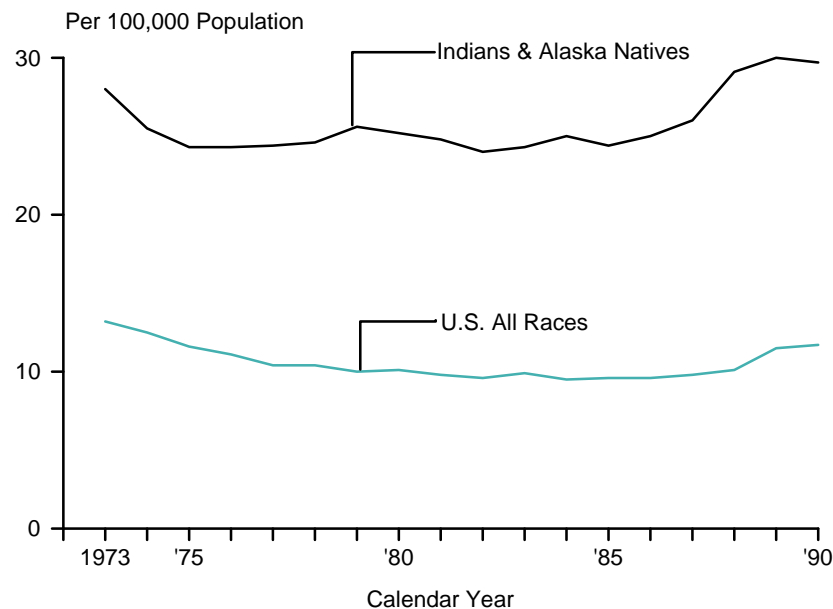


Table 4.30
Diabetes Mellitus Deaths and Mortality Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1991

Age-Adjusted Rate per 100,000 Population

Calendar Year(s)	Indian and Alaska Native		U.S. All Races		U.S. White Rate	Ratio Indian to:	
	Number	Rate	Number	Rate		U.S. All Races	U.S. White
(1991)	275						
1989-1991 (1990)	285	29.7	47,664	11.7	10.4	2.5	2.9
1988-1990 (1989)	301	30.0	46,833	11.5	10.3	2.6	2.9
1987-1989 (1988)	260	29.1	40,368	10.1	9.0	2.9	3.2
1986-1988 (1987)	227	26.0	38,532	9.8	8.7	2.7	3.0
1985-1987 (1986)	195	25.0	37,184	9.6	8.5	2.6	2.9
1984-1986 (1985)	208	24.4	36,969	9.6	8.6	2.5	2.8
1983-1985 (1984)	189	25.0	35,787	9.5	8.5	2.6	2.9
1982-1984 (1983)	179	24.3	36,246	9.9	8.9	2.5	2.7
1981-1983 (1982)	164	24.0	34,583	9.6	8.7	2.5	2.8
1980-1982 (1981)	156	24.8	34,642	9.8	8.8	2.5	2.8
1979-1981 (1980)	173	25.2	34,851	10.1	9.1	2.5	2.8
1978-1980 (1979)	153	25.6	33,192	10.0	9.0	2.6	2.8
1977-1979 (1978)	147	24.6	33,841	10.4	9.4	2.4	2.6
1976-1978 (1977)	133	24.4	32,989	10.4	9.4	2.3	2.6
1975-1977 (1976)	125	24.3	34,508	11.1	10.0	2.2	2.4
1974-1976 (1975)	123	24.3	35,230	11.6	10.4	2.1	2.3
1973-1975 (1974)	110	25.5	37,329	12.5	11.4	2.0	2.2
1972-1974 (1973)	117	28.1	38,208	13.2	11.8	2.1	2.4
(1972)	129		38,674				
1954-1956 (1955)	64	17.0	25,488	13.0	12.6	1.3	1.3

NOTE: Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Number of deaths and U.S. rates are for the single year specified.

Chart 4.31
Age-Adjusted
Gastrointestinal Disease
Death Rates

The age-adjusted gastrointestinal disease death rate for American Indians and Alaska Natives has decreased 81 percent since the 1972-1974 rate of 6.2 deaths per 100,000 population. In 1989-1991, the Indian rate (1.2) was essentially the same as the 1990 U.S. All Races rate (1.3).

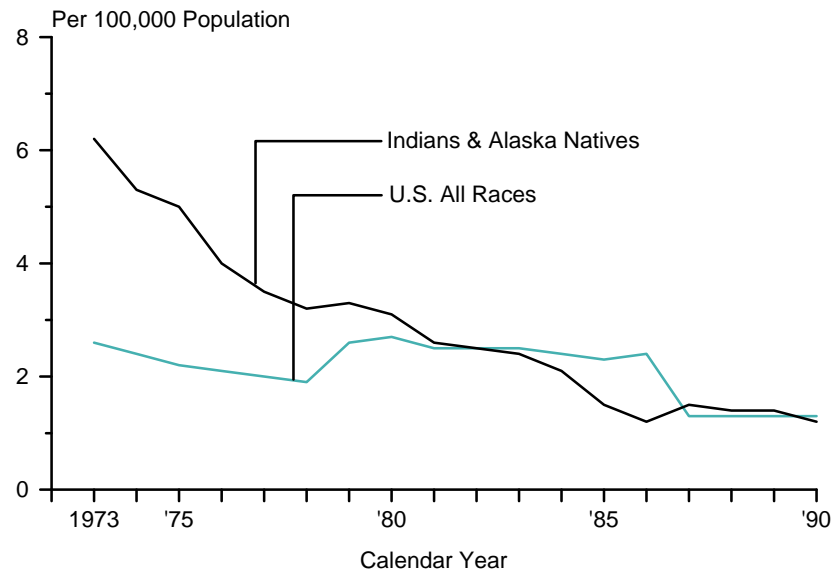


Table 4.31
Gastrointestinal Disease
Deaths and Mortality
Rates

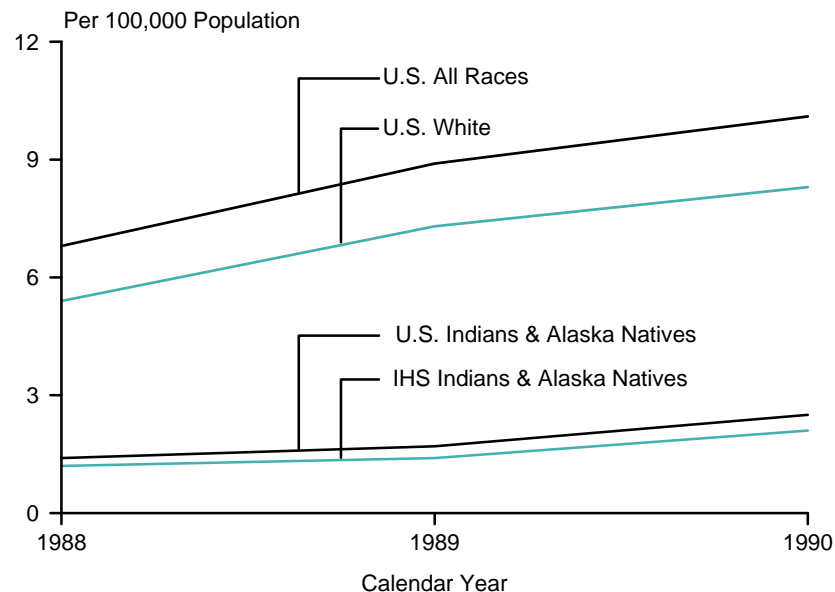
American Indians and
Alaska Natives, IHS Service
Area, and U.S. All Races
and White Populations,
1955-1991
Age-Adjusted Rate per 100,000
Population

Calendar Year(s)	Indian and Alaska Native		U.S. All Races		U.S. White Rate	Ratio Indian to:	
	Number	Rate	Number	Rate		U.S. All Races	U.S. White
(1991)	18						
1989-1991 (1990)	17	1.2	6,007	1.3	1.2	0.9	1.0
1988-1990 (1989)	9	1.4	5,897	1.3	1.2	1.1	1.2
1987-1989 (1988)	24	1.4	5,771	1.3	1.5	1.1	0.9
1986-1988 (1987)	14	1.5	5,629	1.3	1.5	1.2	1.0
1985-1987 (1986)	15	1.2	5,622	2.4	1.2	0.5	1.0
1984-1986 (1985)	13	1.5	5,525	2.3	1.3	0.7	1.2
1983-1985 (1984)	21	2.1	5,594	2.4	1.4	0.9	1.6
1982-1984 (1983)	25	2.4	5,709	2.5	1.4	1.0	1.9
1981-1983 (1982)	18	2.5	5,639	2.5	1.2	1.0	2.2
1980-1982 (1981)	20	2.6	5,733	2.5	1.2	1.0	2.2
1979-1981 (1980)	29	3.1	6,076	2.7	1.6	1.2	2.0
1978-1980 (1979)	29	3.3	5,687	2.6	1.8	1.4	2.0
1977-1979 (1978)	26	3.2	6,201	1.9	1.8	1.8	1.9
1976-1978 (1977)	28	3.5	6,156	2.0	1.8	2.1	2.3
1975-1977 (1976)	37	4.0	6,261	2.1	1.9	2.3	2.5
1974-1976 (1975)	36	5.0	6,558	2.2	2.1	2.6	2.8
1973-1975 (1974)	44	5.3	7,066	2.4	2.3	2.5	2.7
1972-1974 (1973)	37	6.2	7,371	2.6	2.4	2.7	2.9
(1972)	43						
1954-1956 (1955)	165	15.4		3.6	3.1	4.3	5.0

NOTE: Data are presented above for the year in which IHS was established (1955). For this year Reservation State data are shown. Starting in 1972 data are first available, and are shown above, for the specific counties in the IHS service area. Data for these two geographic boundary systems are not directly comparable. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified. Starting in 1979 cause-of-death codes which define gastrointestinal deaths were revised to exclude ICD-9 code 557 (vascular insufficiency of intestine). Currently ICD-9 codes that define gastrointestinal disease deaths include: 004, 006, 007, 008, 009, 535, 555, 556, 558, and 562.

Chart 4.32***Age-Adjusted Acquired Immunodeficiency Syndrome (AIDS) Death Rates***

The number of AIDS deaths for American Indians and Alaska Natives residing in the entire U.S. in 1991 (76) is nearly 4 times the number in 1987 (20). For Indians residing in the IHS service area (about 60 percent of all U.S. Indians), there is nearly a 5 to 1 ratio between 1991 and 1987 (38 to 8). In contrast, the same ratio for the U.S. All Races population is closer to 2 to 1.

**Table 4.32*****Acquired Immunodeficiency Syndrome (AIDS) Deaths and Mortality Rates***

American Indians and Alaska Natives, U.S. and IHS Service Area, and U.S. All Races and White Populations, 1987-1991
Age-Adjusted Rate per 100,000 Population

Calendar Year(s)	Indian and Alaska Native				U.S. All Races		U.S. White Rate
	Entire United States		IHS Service Area				
	Number	Rate	Number	Rate	Number	Rate	
(1991)	76		38		29,555	11.7	9.4
1989–1991 (1990)	36	2.5	16	2.1	25,188	10.1	8.3
1988–1990 (1989)	36	1.7	16	1.4	22,082	8.9	7.3
1987–1989 (1988)	26	1.4	13	1.2	16,602	6.8	5.4
(1987)	20		8		13,468	5.5	4.5

NOTE: Includes causes of death with ICD-9 Codes 042-044, first classified in 1987. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified. Age-adjusted rates based on less than 50 deaths during a 3-year period should be interpreted with caution.

Chart 4.33

Life Expectancy at Birth

Life expectancy at birth for American Indians and Alaska Natives in 1972-1974 was over 10 years less than the life expectancy of the U.S. All Races and White populations in 1973. For 1989-1991 versus 1990, the gap with the U.S. All Races population has narrowed to 2.2 years and with the White population to 2.9 years.

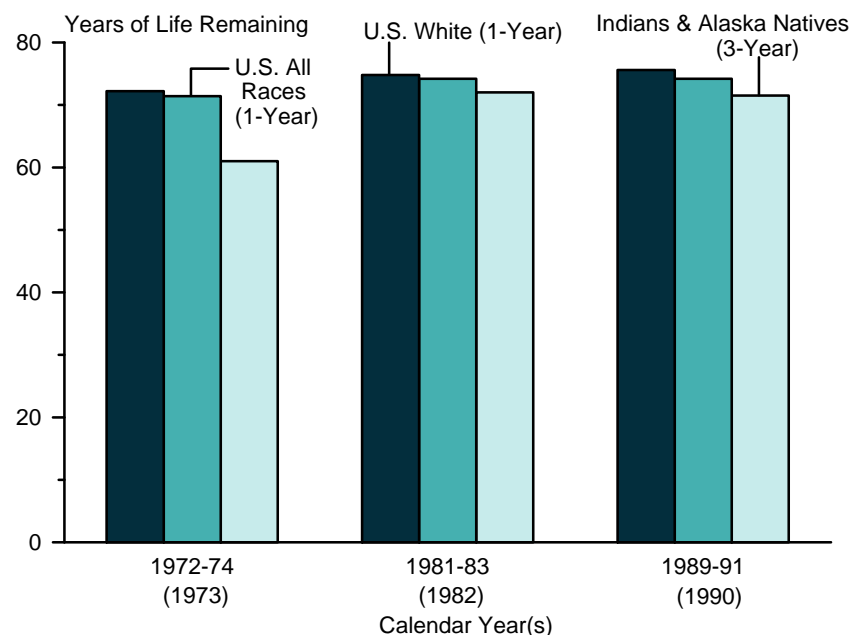


Chart 4.34

Years of Productive Life Lost

The years of productive life lost rate for American Indians and Alaska Natives in 1989-1991 (86.7 per 1,000 population under age 65) is less than half of what it was in 1972-1974 (188.3). Although the ratios have decreased considerably over this time period, the Indian rate is still 1.54 times the U.S. All Races rate (56.2) and 1.97 times the White rate (44.0) in 1990.

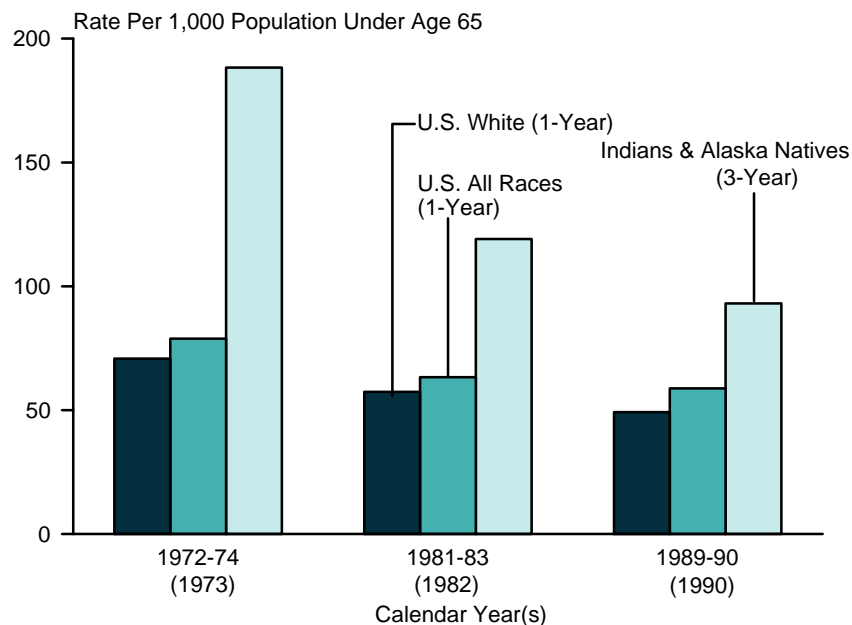


Chart 4.35
Age-Adjusted Mortality Rate

The age-adjusted mortality rate (all causes) for American Indians and Alaska Natives has decreased 42 percent from 1972-1974 (1,007.4 per 100,000 population) to 1989-1991 (585.2). From 1973 to 1990, the U.S. All Races rate decreased 25 percent (692.9 to 520.2) as did the White rate (659.3 to 492.8).

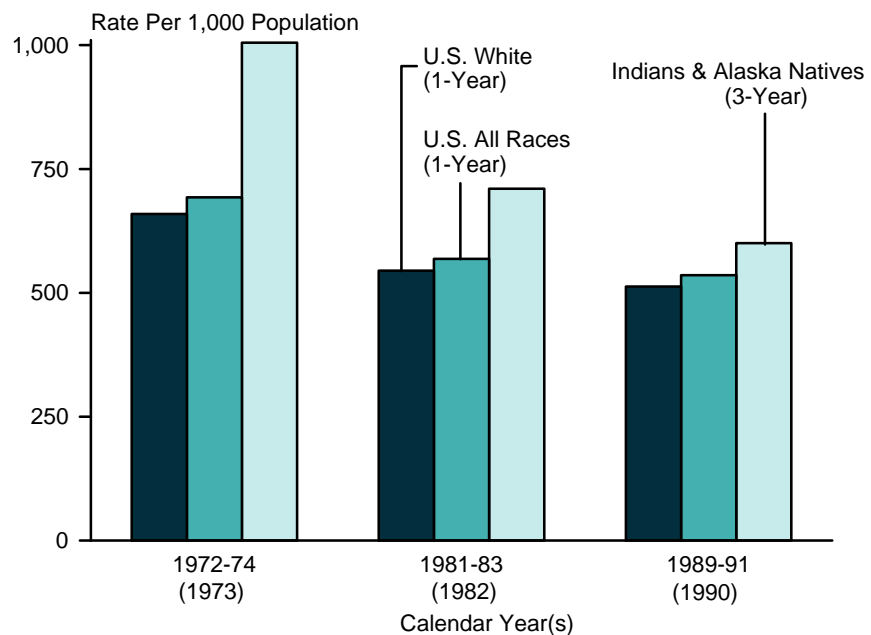
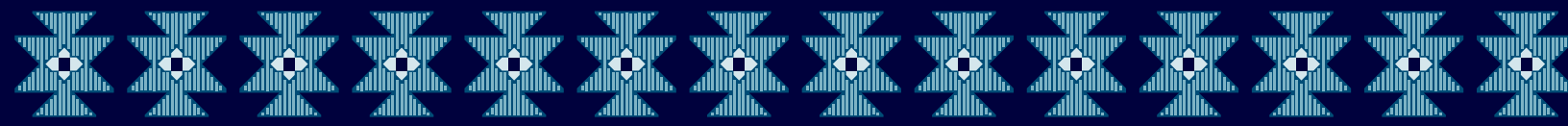


Table 4.33
Overall Measures of Indian Health

IHS Service Area Population Compared with the U.S. All Races and White Populations

	Life Expectancy At Birth (Years)	Years of Productive Life Lost (Rate per 1,000 Population Under Age 65)	Age-Adjusted Mortality Rate (per 100,000 Population)
IHS Service Area:			
1989-1991	73.2	86.7	585.2
1981-1983	71.3	108.1	658.7
1972-1974	61.0	188.3	1,007.4
U.S. All Races:			
1990	75.4	56.2	520.2
1982	74.5	59.0	553.8
1973	71.4	78.9	692.9
U.S. White:			
1990	76.1	44.0	492.8
1982	75.1	55.1	531.8
1973	72.2	70.8	659.3
RATIO: IHS to U.S. All Races:			
1989-1991(1990)	0.97	1.54	1.12
1981-1983(1982)	0.96	1.83	1.19
1972-1974(1973)	0.85	2.39	1.45
RATIO: IHS to U.S. White:			
1989-1991(1990)	0.96	1.97	1.19
1981-1983(1982)	0.95	1.96	1.24
1972-1974(1973)	0.84	2.66	1.53



PART 5 –PATIENT CARE STATISTICS

Chart 5.1

Indian Health Service Program Accomplishments Since 1973

The Indian Health Service maternal and infant mortality review committees have helped to reduce the infant mortality rate 54 percent and the maternal mortality rate 65 percent since 1972–1974. Likewise, the Indian Health Service tuberculosis control program has helped to reduce the age-adjusted tuberculosis mortality rate 74 percent.

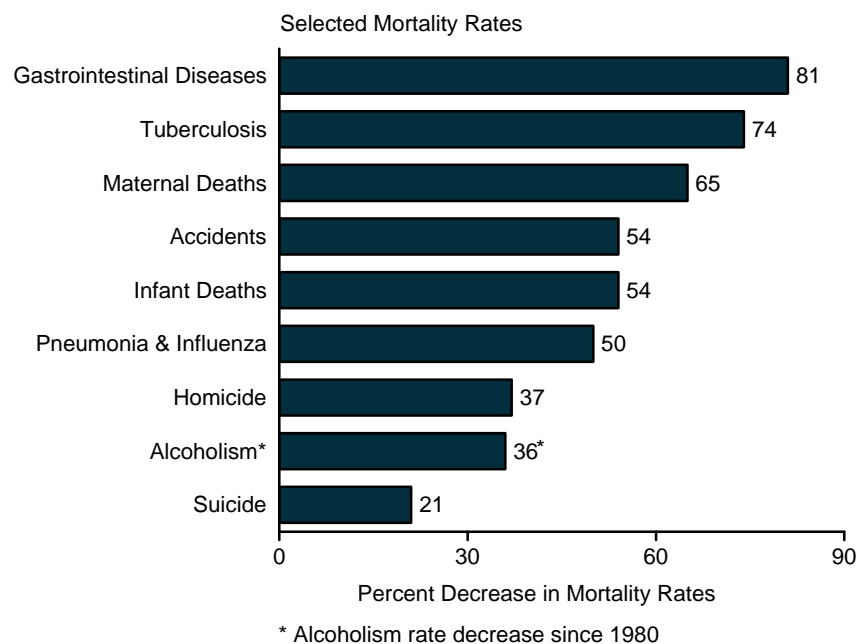


Table 5.1

Program Accomplishments

IHS Service Area

Health Improvements	CYs 1972, 1974 Rate	CYs 1989, 1991 Rate	Percent Decrease
Death Rates:			
Infant ¹	22.2	10.2	54
Maternal ²	27.7	9.8	65
Pneumonia and influenza ³	40.8	20.5	50
Tuberculosis, all forms ³	10.5	2.7	74
Gastrointestinal diseases ³	6.2	1.2	81
Accidents ³	188.0	86.0	54
Suicide ³	21.0	16.5	21
Homicide ³	24.3	15.3	37
Alcoholism ³	⁴ 59.0	37.6	36

¹ Rate per 1,000 live births.

² Rate per 100,000 live births.

³ Age-adjusted rate per 100,000 population.

⁴ 1979-81 age-adjusted alcoholism mortality rate, since specific mortality codes currently used to identify alcoholism deaths were not in use prior to 1979.

Chart 5.2

**Indian Health Service
Tribal Health Contract
and Grant Awards**

Indian Health Service contract and grant awards for Tribal health in FY 1993 are 2.4 times what they were in FY 1985, \$551 million compared to \$234 million.

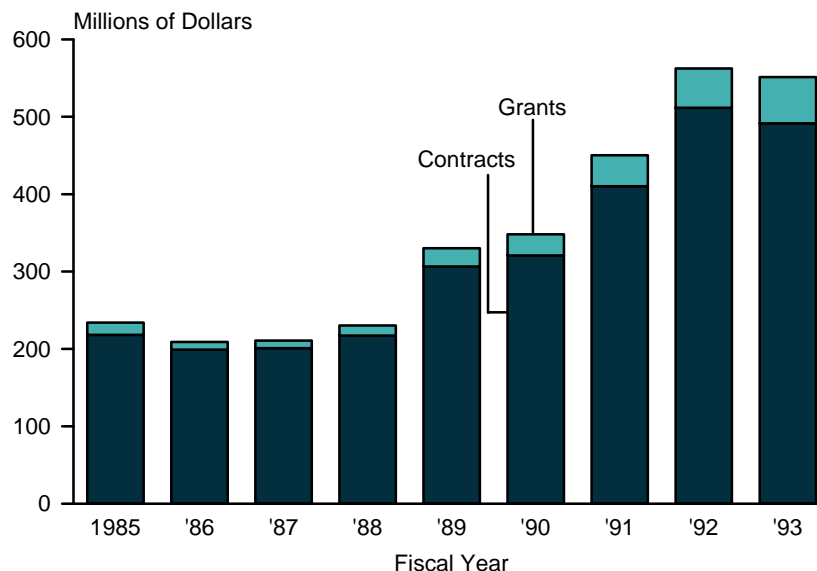


Table 5.2

**IHS Tribal Health
Contract and Grant
Awards, FY 1975–1993**

Millions of Dollars

Fiscal Year	Total	Contracts	Grants ¹
1993	\$551.4	² \$491.5	\$59.9
1992	562.5	² 511.6	50.9
1991	450.2	² 410.1	40.1
1990	348.1	² 320.7	27.4
1989	330.1	² 306.6	23.5
1988	230.3	217.2	13.1
1987	210.7	200.9	9.8
1986	209.0	199.0	10.1
1985	234.0	218.1	15.9
1984	194.0	177.5	16.5
1983	157.7	143.1	14.6
1982	141.1	126.5	14.6
1981	142.8	130.7	12.1
1980	121.9		
1979	74.0		
1978	70.1		
1977	57.9		
1976	32.6		
1975	17.4		

¹ Project grant obligations shown for first time in FY 1981. During 1987 and 1988, IHS Scholarship Program funding was reported under contracts rather than grants. The IHS Loan Repayment Program was initiated as a contract program starting in 1988. Both the IHS Scholarship and the IHS Loan Repayment programs were converted to grant programs in 1989. Includes Urban Indian Health Program grants that were first awarded in 1991. Includes Tribal self-governance compact grants that were first awarded in 1993.

² Starting in 1989, contracts issued to Tribal organizations for the construction of health facilities by the Office of Engineering Services are included in the contracts category. Contract awards also include those issued by IHS Area Offices and IHS Headquarters and exclude purchase orders below \$25,000. Includes new contracts and contract modifications.

NOTE: Contract report completed as of March 17, 1994. Grant report completed as of January 5, 1994.

SOURCE: For Contract Data: 1988 to Present, PHS Contract Information System, Room 18.50, Parklawn Bldg., 443.4759, prior to 1988, the IMPAC Data System run by NIH for PHS, and For Grant Data: PHS Grants Data System.

Chart 5.3

**Indian Health Service
Tribal Health Contract
and Grant Awards by
Type, FY 1993**

The \$425 million reported under the P.L. 93-638 Contracts category for FY 1993 comprised 77 percent of the total Indian Health Service contract and grant awards for Tribal health.

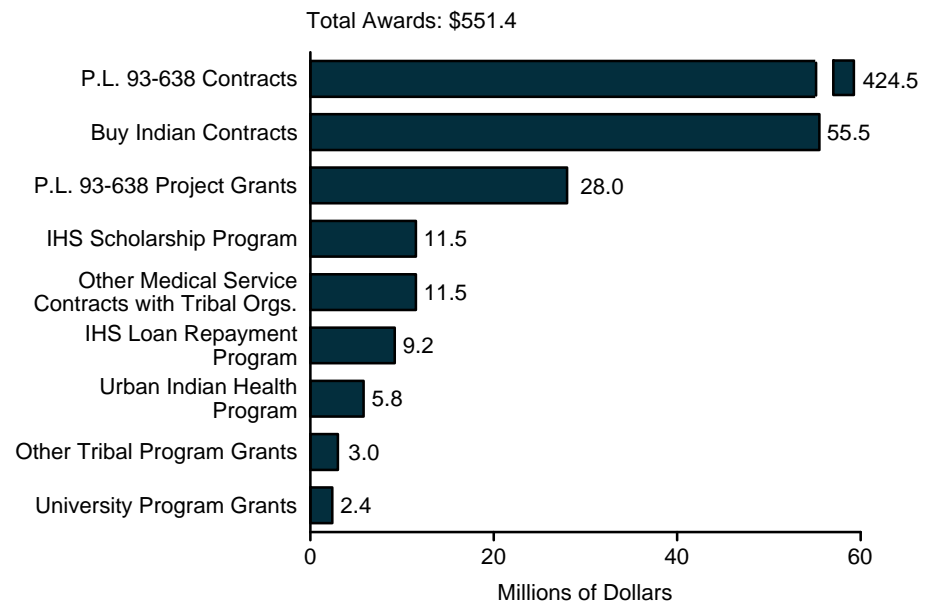


Table 5.3

**IHS Tribal Health
Contract and Grant
Awards by Type, FY 1993**

Type of Contract or Grant	Total \$ Awarded (Millions)	Percent Distribution
Contract and Grant Total	\$551.4	100.0
Contract, Total ¹	491.5	89.1
P.L. 93. 638 Contracts	424.5	77.0
Buy Indian Contracts	55.5	10.1
Other Types of Medical Services Contracts with Tribal Organizations ²	11.5	2.1
Grant, Total	59.9	10.9
P.L. 93. 638 Project Grants ³	28.0	5.1
IHS Scholarship Program	11.5	2.1
IHS Loan Repayment Program	9.2	1.7
Urban Indian Health Programs ⁴	5.8	1.1
Other Tribal Program Grants ⁵	3.0	0.5
University Program Grants ⁶	2.4	0.4

¹ Contract awards include those of IHS Area Offices, IHS Headquarters and the Office of Engineering Services. They include new contracts and contract modifications, indirect costs, and exclude purchase orders below \$25,000.

² Includes medical service contracts with American Indian/Alaska Native managed organizations (solicitation procedure code 4K).

³ Includes Tribal management and services grants, and self-governance compact grants.

⁴ Urban Indian Health Program grants.

⁵ Includes grants for mental health, adolescent health, child abuse, research, Tribal recruitment/retention, and other special projects.

⁶ Includes universities that sponsor recruitment and training programs for IHS.

NOTE: Contract report completed as of March 17, 1994. Grant report completed as of January 5, 1994.

SOURCE: PHS Contract Information System, Rm. 18.50, Parklawn Bldg., 443.4759, and the PHS Grants Data System

Chart 5.4

Urban Indian Health Program Workload and Appropriation

The appropriation for the Urban Indian Health Program has increased 91 percent since FY 1984 while the workload has more than doubled. In FY 1992, the appropriation for this program was \$17.2 million, and there were over 757,000 patient encounters. Complete workload data for FY 1993 were not available in time for this edition.

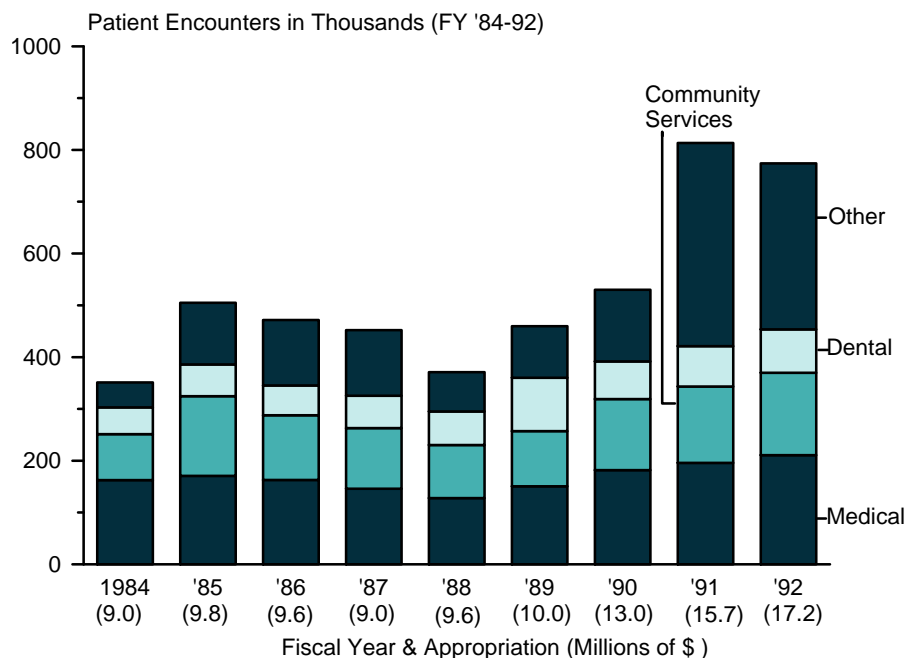


Table 5.4

Urban Indian Health Program Workload and Appropriation, FY 1984-1992

Fiscal Year	Total Workload ¹	Medical	Community Services	Dental	Other ²	Appropriation (Thousands of Dollars)
1992	757,606	192,921	142,658	82,076	339,951	17,195
1991	802,335	172,297	138,204	76,028	415,806	15,687
1990	530,228	181,974	137,200	72,470	138,584	13,049
1989	459,684	150,472	106,940	102,886	99,386	9,962
1988	370,684	128,000	102,481	64,609	75,853	9,624
1987 ³	451,988	146,228	116,898	62,377	126,485	9,000
1986	471,757	163,004	124,783	57,663	126,307	9,644
1985	504,799	170,913	153,761	60,956	119,169	9,800
1984	351,071	162,563	88,724	51,800	47,984	9,000

¹ Number of services provided. Fiscal Years 1981. 1983, number of patient encounters. Fiscal Years 1984. Present.

² The Other category includes the following types of services: nutrition education, health education, mental health, optometric services, and other allied health services which includes substance abuse counseling.

³ Beginning in Fiscal Year 1987 and thereafter, the Tulsa and Oklahoma City Urban Programs are excluded since they were funded as demonstration projects under the IHS hospitals and clinics activity.

Chart 5.5

Number of Hospital Admissions, IHS and Tribal Direct and Contract General Hospitals

Total hospital admissions peaked in FY 1978 at 112,000. In FY 1992, there were over 93,000 total admissions.

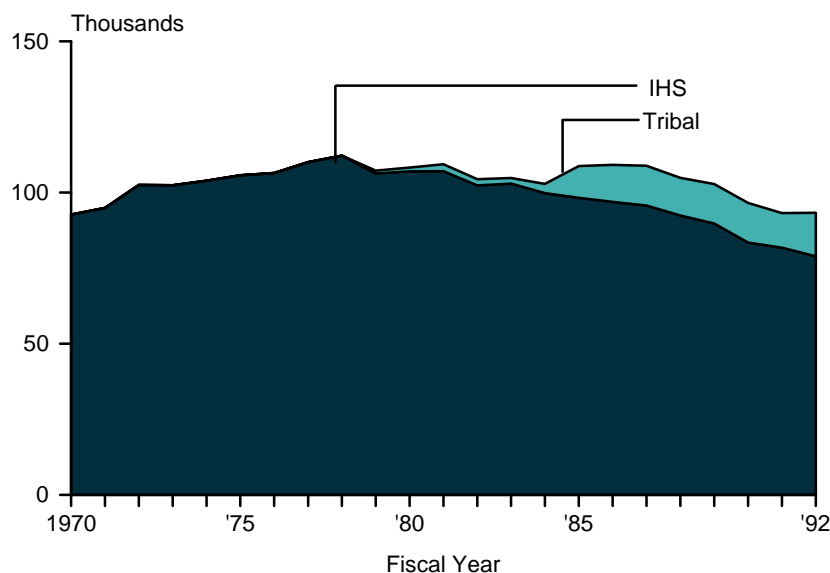


Table 5.5

Number of Admissions

IHS and Tribal Direct and Contract General Hospitals, Fiscal Years 1955–1993

Fiscal Year	Total IHS and Tribal Admissions	Indian Health Service			Tribal		
		Total	Direct	Contract ¹	Total	Direct	Contract
1993	NA	NA	60,597	NA	NA	8,432	NA
1992	93,271	78,897	61,992	16,905	14,374	9,017	5,357
1991	93,180	81,746	64,312	17,434	11,434	6,924	4,510
1990	96,539	83,462	65,972	17,490	13,077	7,022	6,055
1989	102,793	89,777	71,243	18,534	13,016	6,558	6,458
1988	104,868	92,393	76,488	15,905	12,475	6,111	6,364
1987	108,835	95,700	76,244	19,456	13,135	5,953	7,182
1986	109,181	96,886	78,162	18,724	12,295	4,969	7,326
1985	108,777	98,245	78,423	19,822	10,532	3,678	² 6,854
1984	102,843	99,849	77,522	22,327	2,994	2,994	
1983	104,806	102,961	78,027	24,934	1,845	1,845	
1982	104,418	102,343	77,070	25,273	2,075	2,075	
1981	109,353	107,087	81,387	25,700	2,266	2,266	
1980	108,242	106,992	77,798	29,194	1,250	1,250	
1975	105,735	105,735	74,594	31,141			
1970	92,710	92,710	67,877	24,833			
1965	91,744	91,744	67,744	24,000			
1960	76,754	76,754	56,874	19,880			
1955	50,143	50,143	42,762	7,381			

¹ Number of discharges used as estimate for number of admissions.

² Comparable Tribal contract health services data not available prior to FY 1985.

NOTE: NA denotes data not available.

SOURCE: IHS Direct: Monthly Report of Inpatient Services (Form IHS-202-1)

IHS Contract: Annual Report 3I

Tribal Direct: Monthly Report of Inpatient Services

Tribal Contract: IHS Area Submissions

Chart 5.6

Average Daily Hospital Patient Load, IHS and Tribal Direct and Contract General Hospitals

The average daily hospital patient load in Indian Health Service and Tribal direct and contract general hospitals has decreased 51 percent since FY 1970. Since 1990, the average patient load has remained about 1,200.

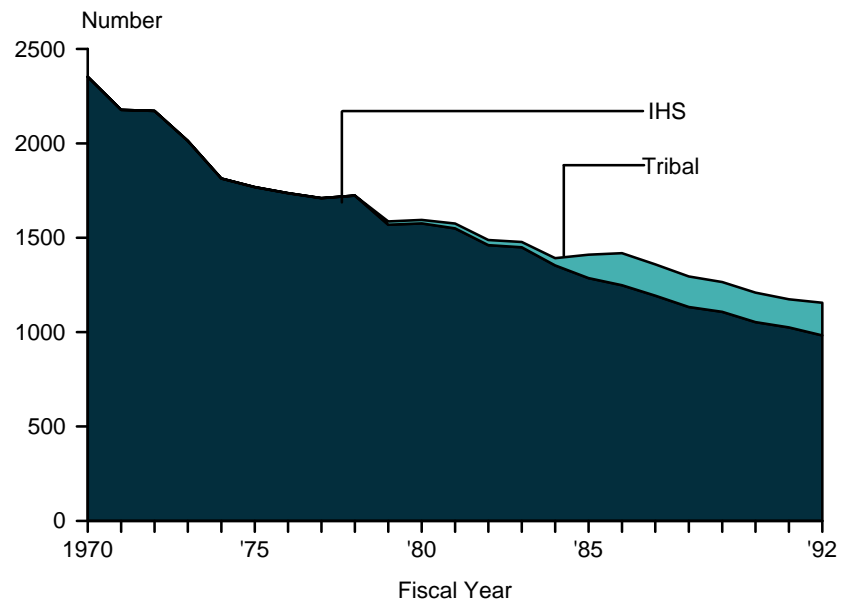


Table 5.6

Average Daily Patient Load

IHS and Tribal Direct and Contract General Hospitals, Fiscal Years 1955–1993

Fiscal Year	Grand Total ADPL	Indian Health Service			Tribal		
		Total	Direct	Contract	Total	Direct	Contract
1993	NA	NA	735	NA	NA	108	NA
1992	1,155	982	758	224	173	112	61
1991	1,174	1,025	794	231	149	96	53
1990	1,209	1,053	825	228	156	90	66
1989	1,265	1,107	873	234	158	90	68
1988	1,295	1,133	939	194	162	88	74
1987	1,359	1,193	960	233	166	87	79
1986	1,418	1,248	1,017	231	170	81	89
1985	1,410	1,286	1,052	234	124	47	¹ 77
1984	1,392	1,353	1,072	281	39	39	
1983	1,477	1,449	1,119	330	28	28	
1982	1,488	1,460	1,121	339	28	28	
1981	1,575	1,550	1,194	356	25	25	
1980	1,594	1,576	1,178	398	18	18	
1975	1,768	1,758	1,330	438			
1970	2,353	2,353	1,729	624			
1965	3,127	3,127	2,244	883			
1960	3,142	3,142	2,232	910			
1955	3,711	3,711	2,531	1,180			

¹ Tribal contract data not available prior to FY 1985.

NOTE: NA denotes data not available.

SOURCE: IHS Direct: Monthly Report of Inpatient Services (Form IHS-202-1)

IHS Contract: Annual Report 3I

Tribal Direct: Monthly Report of Inpatient Services

Tribal Contract: IHS Area Submissions

Chart 5.7

Leading Causes of Hospitalization, IHS and Tribal Direct and Contract Hospitals, FY 1992

In FY 1992, 20.9 percent of all discharges from Indian Health Service and Tribal direct and contract general hospitals pertained to obstetric deliveries and complications of puerperium and pregnancy. This was followed by respiratory system diseases at 13.0 percent.

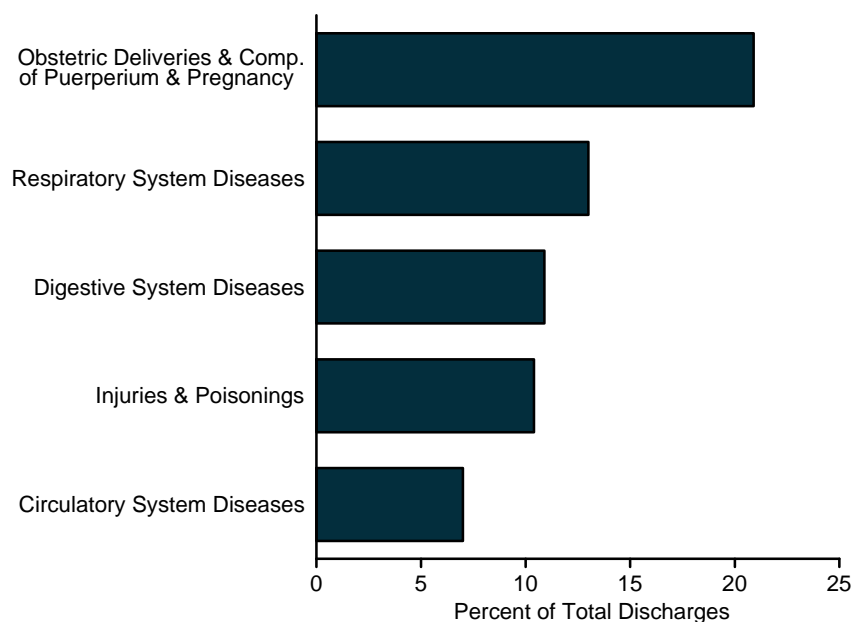


Table 5.7

Ten Leading Causes of Hospitalization for GM&S Patients

Indian Health Service and Tribal Direct and Contract General Hospitals, FY 1992

Diagnostic Category	Number of Discharges			Percent Distribution		
	Total	Direct	Contract	Total	Direct	Contract
All categories	86,823	67,619	19,204	100.0	77.9	22.1
				100.0	100.0	100.0
Obstetric deliveries and complications of puerperium & pregnancy	18,169	16,163	2,006	20.9	23.9	10.4
Respiratory system diseases	11,295	9,446	1,849	13.0	14.0	9.6
Digestive system diseases	9,470	6,966	2,504	10.9	10.3	13.0
Injuries and poisonings	8,992	5,824	3,168	10.4	8.6	16.5
Circulatory system diseases	6,053	3,515	2,538	7.0	5.2	13.2
Symptoms, signs, & ill-defined conditions	5,278	4,092	1,186	6.1	6.1	6.2
Genitourinary system diseases	4,860	3,791	1,069	5.6	5.6	5.6
Mental disorders	3,610	2,779	831	4.2	4.1	4.3
Endocrine, nutritional and metabolic disorders	3,541	2,798	743	4.1	4.1	3.9
Skin and subcutaneous tissue diseases	2,871	2,457	414	3.3	3.6	2.2
All other	12,684	9,788	2,896	14.6	14.5	15.1

SOURCE: Direct: Annual Report 2C

Contract: Annual Report 3I

Chart 5.8

Leading Causes of Hospitalization for Males, IHS and Tribal Direct and Contract Hospitals, FY 1992

For males, 17.0 percent of all discharges (FY 1992) from Indian Health Service and Tribal direct and contract general hospitals pertained to respiratory system diseases. This was followed by injuries and poisonings (15.9 percent), and digestive system diseases (12.6 percent).

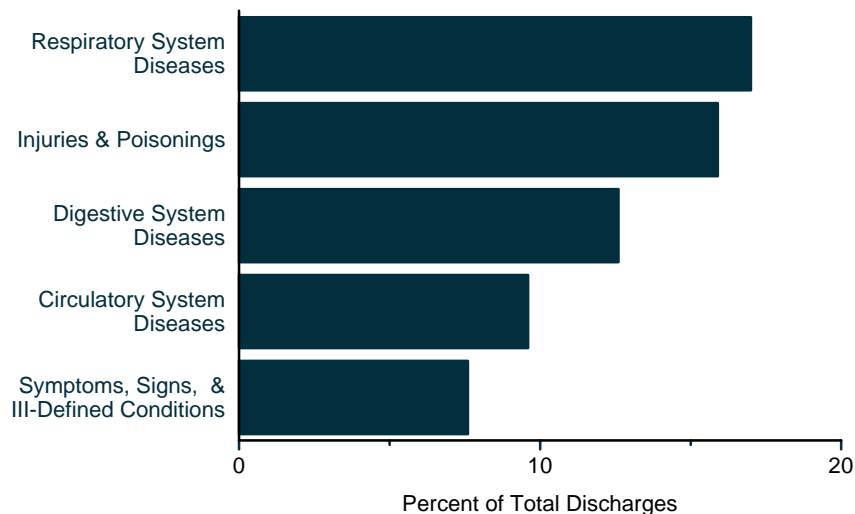


Chart 5.9

Leading Causes of Hospitalization for Females, IHS and Tribal Direct and Contract Hospitals, FY 1992

For females, 34.1 percent of all discharges (FY 1992) from Indian Health Service and Tribal direct and contract general hospitals pertained to obstetric deliveries and complications of puerperium and pregnancy. This was followed by respiratory system diseases (10.5 percent), and digestive system diseases (9.8 percent).

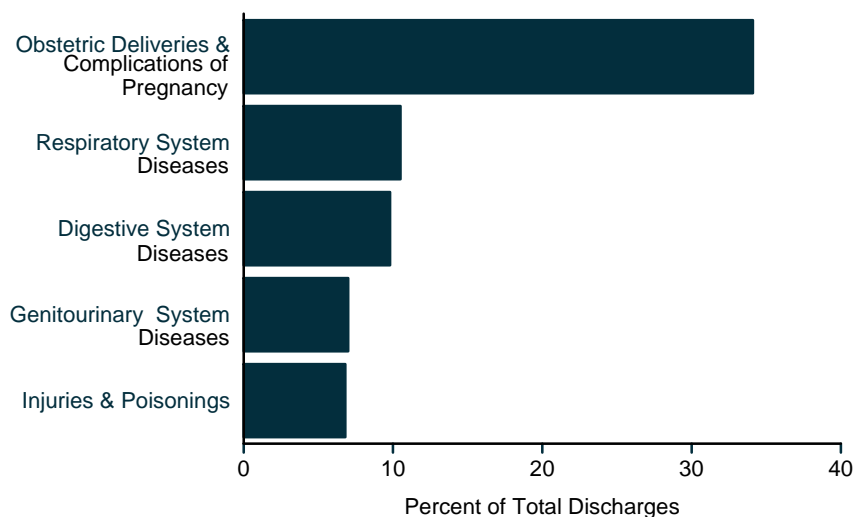


Table 5.8

Ten Leading Causes of Hospitalization by Sex

Indian Health Service and
Tribal Direct and Contract
General Hospitals, Fiscal
Year 1992

Diagnostic Category	Male	
	Number of Discharges	Percent of Total
All categories	33,616	100.0
Respiratory system diseases	5,728	17.0
Injuries and poisonings	5,358	15.9
Digestive system diseases	4,252	12.6
Circulatory system diseases	3,240	9.6
Symptoms, signs, and ill-defined conditions	2,549	7.6
Mental disorders	2,317	6.9
Endocrine, nutritional, and metabolic disorders	1,641	4.9
Skin & subcutaneous tissue diseases	1,617	4.8
Nervous system and sense organ diseases	1,172	3.5
Genitourinary system diseases	1,147	3.4
All other	4,595	13.7

Diagnostic Category	Female	
	Number of Discharges	Percent of Total
All categories	53,207	100.0
Obstetric deliveries and complications of pregnancy and puerperium	18,169	34.1
Respiratory system diseases	5,567	10.5
Digestive system diseases	5,218	9.8
Genitourinary system diseases	3,713	7.0
Injuries and poisonings	3,634	6.8
Circulatory system diseases	2,813	5.3
Symptoms, signs, and ill-defined conditions	2,729	5.1
Endocrine, nutritional, and metabolic disorders	1,900	3.6
Supplementary conditions	1,481	2.8
Mental disorders	1,293	2.4
All other	6,690	12.6

SOURCE: IHS and Tribal Direct: On-Request Report 21
IHS and Tribal Contract: On-Request Report 19

Chart 5.10

Hospital Discharge Rates by Age

For both the Indian Health Service (FY 1992) and U.S. (CY 1992), discharge rates were highest for the age groups under 1 year and over 64 years. The U.S. rate was greater than the Indian rate except for the age group under 1 year.

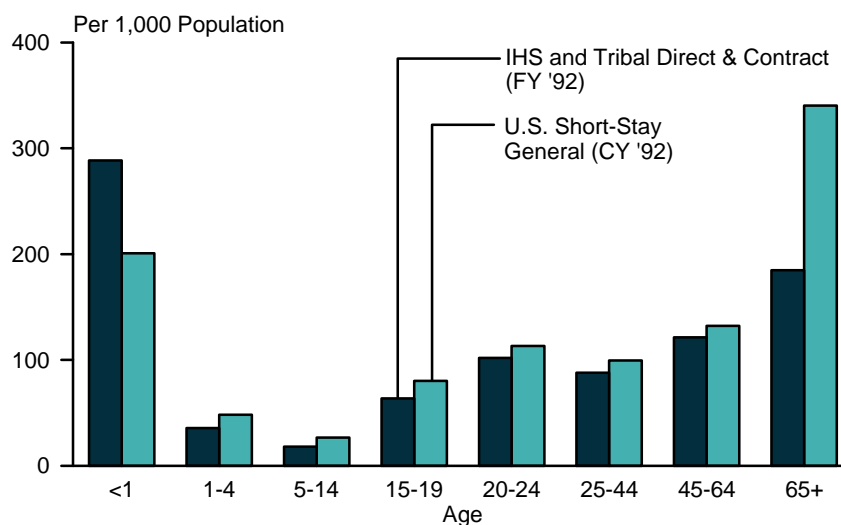


Table 5.10

Comparison of IHS and U.S. Hospital Discharge Rates by Age

IHS and Tribal Direct and Contract General Hospitals, FY 1992 and U.S. General Short-Stay Hospitals, CY 1992

Age at Admission	Discharges per 1,000 Population		Percent Difference IHS Rate to U.S. Rate
	IHS	U.S.	
All Ages	75.5	122.1	-38.2
Under 1 year	289.0	206.3	40.1
1. 4 years	35.9	51.9	-30.8
5. 14 years	17.6	24.8	-29.0
15. 19 years	57.1	75.1	-24.0
20. 24 years	93.6	108.6	-13.8
25. 44 years	84.0	97.1	-13.5
45. 64 years	116.8	131.0	-10.8
65 years and over	189.0	336.5	-43.8

NOTE: IHS discharge rates were calculated using the IHS FY 1992 user population.

SOURCE: IHS. Annual Reports 2C and 3I

U.S.. Utilization of Short-Stay Hospitals, Annual Summary of the U.S., NCHS

Chart 5.11

**Beds per Hospital, IHS
(FY 1993) vs U.S.
Short-Stay (CY 1992)**

76 percent of Indian Health Service hospitals (FY 1993) had fewer than 50 beds, as compared to less than 21 percent of U.S. short-stay hospitals (CY 1992).

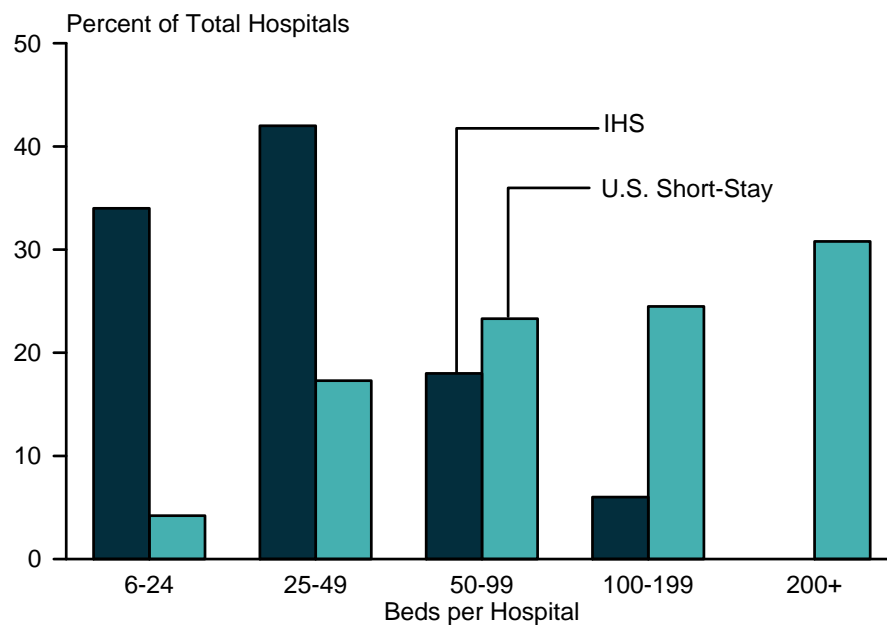


Table 5.11

**Comparison of Indian
Health Service and U.S.
Hospitals by Bed Size**

IHS and Tribal Hospitals,
FY 1993 and U.S.
Short-Stay Hospitals, CY
1992

Bed Size	Number of Hospitals		Percent of Total	
	IHS ¹	U.S.	IHS	U.S.
All	49	5,292	100.0	100.0
6-24	16	230	32.7	4.3
25-49	21	900	42.9	17.0
50-99	9	1,210	18.4	22.9
100-199	3	1,321	6.1	25.0
200+	.	1,631	.	30.8

¹ Operated by IHS or the Tribes on September 30, 1993.

SOURCE: IHS. Monthly Report of Inpatient Services

U.S.. Hospital Statistics, 1993-94 Edition, American Hospital Association, Table 5A

Chart 5.12

Number of Outpatient Visits, IHS and Tribal Direct and Contract Facilities

Outpatient visits to Indian Health Service and Tribal direct and contract facilities have increased 217 percent since FY 1970. In FY 1992, there were approximately 5.7 million visits.

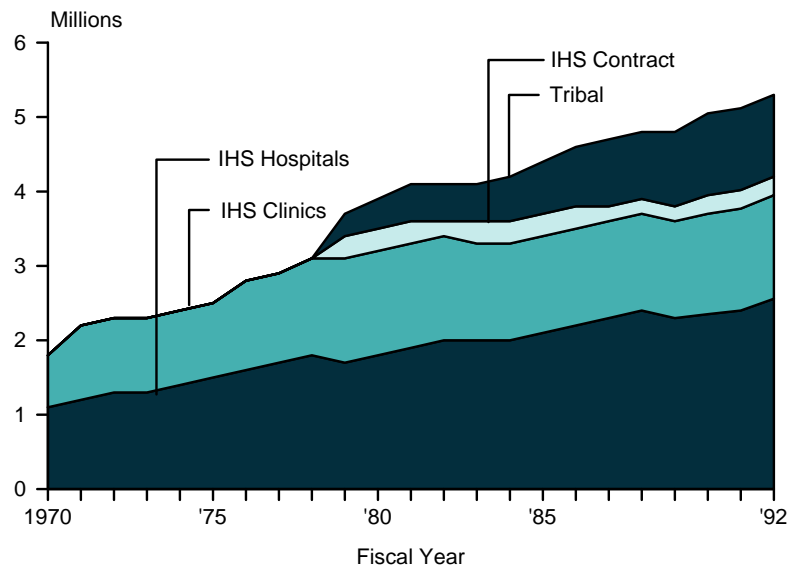


Table 5.12

Number of Outpatient Visits

Indian Health Service and Tribal Direct and Contract Facilities, Fiscal Years 1955–1993

Fiscal Year	Grand Total	Indian Health Service Direct Facilities			IHS Contract	Tribal Direct	Tribal Contract
		Total	Hospitals	Health Centers and Other Field Clinics			
1993	NA	4,079,655	2,668,277	1,411,378	NA	1,453,247	NA
1992	5,659,820	3,924,484	2,561,024	1,363,460	167,697	1,407,421	160,218
1991	5,211,351	3,762,580	2,481,726	1,280,854	154,488	1,126,685	167,598
1990	5,031,262	3,629,952	2,363,459	1,266,493	161,001	1,084,923	155,386
1989	4,955,078	3,614,390	2,323,010	1,291,380	207,156	999,128	134,404
1988	4,989,680	3,702,762	2,353,106	1,349,656	175,569	943,322	168,027
1987	4,806,027	3,600,697	2,278,291	1,322,406	203,040	858,018	144,272
1986	4,745,887	3,507,725	2,200,039	1,307,686	295,227	803,859	139,076
1985	4,432,054	3,389,618	2,088,973	1,300,645	275,457	667,651	² 99,328
1984	4,051,973	3,248,660	1,982,264	1,266,396	265,073	538,240	
1983	3,989,990	3,252,701	1,955,462	1,297,239	267,899	469,390	
1982	4,065,901	3,334,365	1,973,688	1,360,677	236,706	494,830	
1981	4,053,326	3,319,479	1,934,590	1,384,889	³ 266,577	467,270	
1980	3,869,936	3,194,936	1,795,607	1,399,329	¹ 275,000	¹ 400,000	
1975		2,501,050	1,465,816	1,035,234			
1970		1,786,920	1,068,820	718,100			
1965		1,325,400	757,700	567,700			
1960		989,500	585,100	404,400			
1955		455,000	355,000	100,000			

¹ Estimate.

² Comparable Tribal contract health services data not available prior to FY 1985.

³ Comparable IHS contract health services data not available prior to FY 1981.

NOTE: NA denotes data not available.

SOURCE: IHS Direct: Annual Report 1A

IHS Contract: Annual Report 3G

Chart 5.13

**Leading Causes of
Outpatient Visits, Indian
Health Service and Tribal
Direct and Contract
Facilities (FY 1992)**

In FY 1992, the leading cause of outpatient visits in Indian Health Service and Tribal direct and contract facilities was supplemental classification. This was followed by respiratory system diseases.

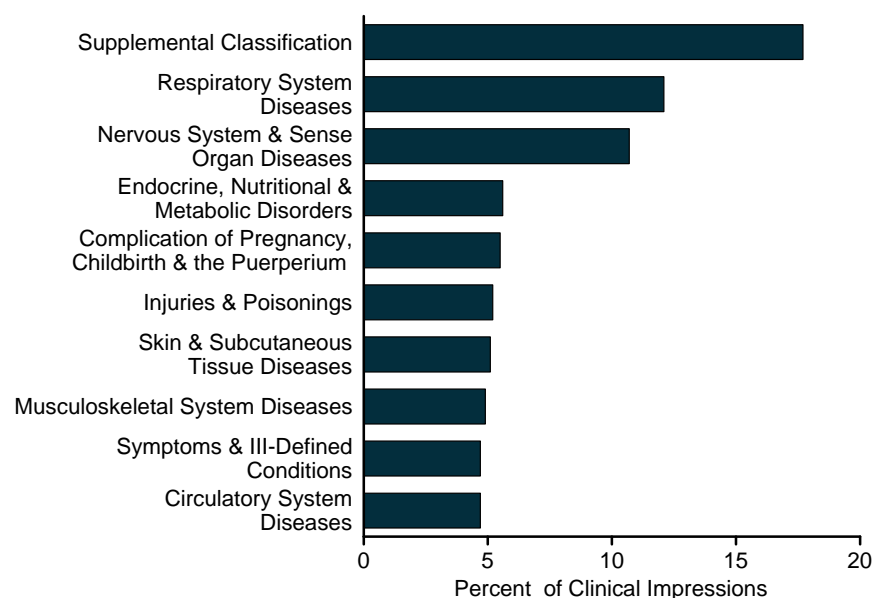


Table 5.13

**Ten Leading Causes of
Outpatient Clinical
Impressions**

Indian Health Service and
Tribal Direct and Contract
Facilities, FY 1992

Diagnostic Category	Number of Clinical Impressions			Percent Distribution		
	Total	Direct	Contract	Total	Direct	Contract
All categories	7,109,177	6,828,611	280,566	100.0	96.1	3.9
				100.0	100.0	100.0
Supplemental classification	1,259,087	1,233,539	25,548	17.7	18.1	9.1
Respiratory system diseases	857,570	824,191	33,379	12.1	12.1	11.9
Nervous system & sense organ diseases	757,230	720,776	36,454	10.7	10.6	13.0
Endocrine, nutritional and metabolic disorders	401,319	391,045	10,274	5.6	5.7	3.7
Complications of pregnancy, childbirth & the puerperium	388,435	381,883	6,552	5.5	5.6	2.3
Injuries and poisonings	369,096	330,893	38,203	5.2	4.8	13.6
Skin and subcutaneous tissue diseases	361,471	348,799	12,672	5.1	5.1	4.5
Musculoskeletal system diseases	347,506	326,681	20,825	4.9	4.8	7.4
Symptoms, signs, & ill-defined conditions	334,579	314,773	19,806	4.7	4.6	7.1
Circulatory system diseases	333,592	320,959	12,633	4.7	4.7	4.5
All other	1,699,292	1,635,072	64,220	23.9	23.9	22.9

SOURCE: Direct: Annual Report 2C

Contract: Annual Report 3I

Chart 5.14

Leading Causes of Male Outpatient Visits, Indian Health Service and Tribal Direct and Contract Facilities (FY 1992)

For Indian males, the leading cause of outpatient visits (FY 1992) in Indian Health Service and Tribal direct and contract facilities was supplemental classification. This was followed by respiratory system diseases.

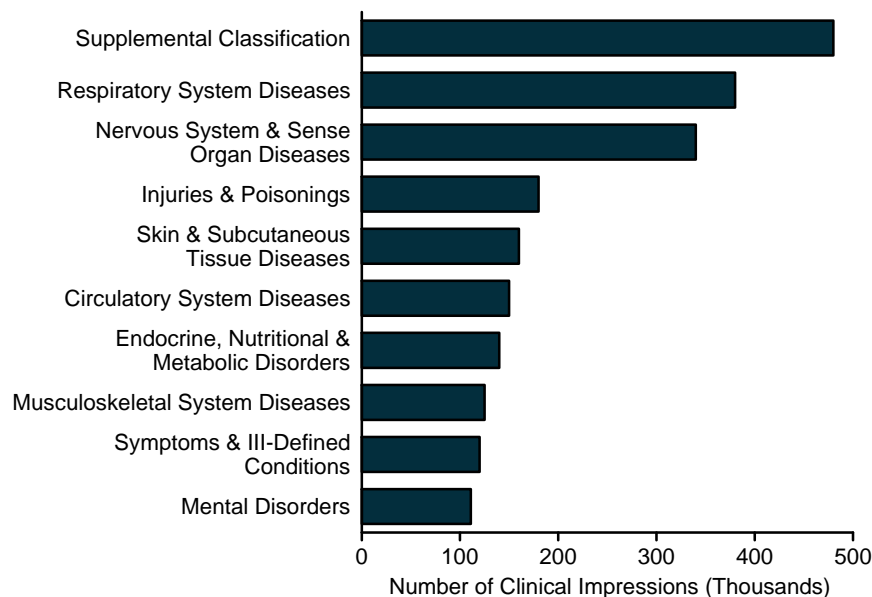


Chart 5.15

Leading Causes of Female Outpatient Visits, Indian Health Service and Tribal Direct and Contract Facilities (FY 1992)

For Indian females, the leading cause of outpatient visits (FY 1992) in Indian Health Service and Tribal direct and contract facilities was supplemental classification. This was followed by respiratory system diseases.

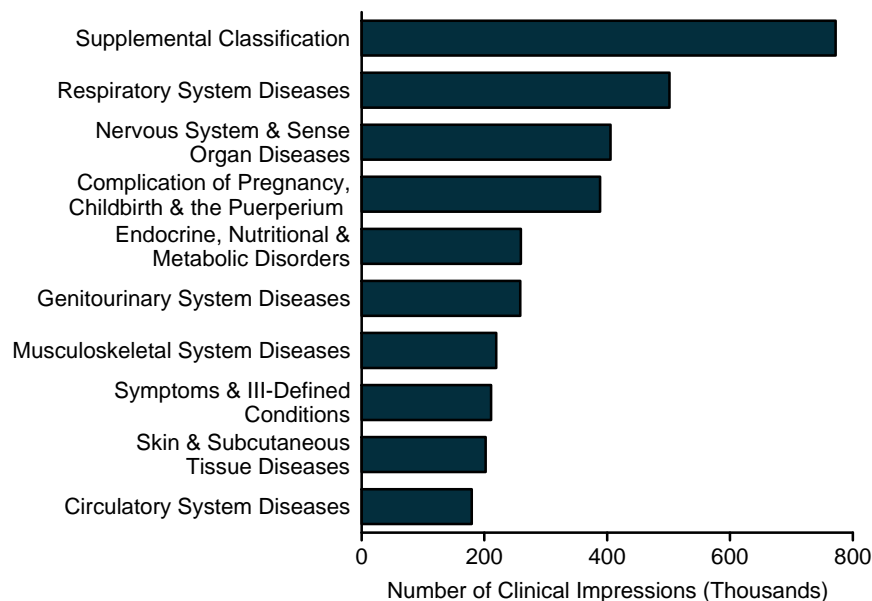


Table 5.14

***Number of Outpatient
Clinical Impressions for
Leading Major Categories
by Sex***

Indian Health Service and
Tribal Direct and Contract
Facilities, FY 1992

Male		Female	
Category	Number of Clinical Impressions	Category	Number of Clinical Impressions
Supplemental classification	487,000	Supplemental classification	772,087
Respiratory system diseases	356,084	Respiratory system diseases	501,486
Nervous system & sense organ diseases	339,736	Nervous system & sense organ diseases	405,335
Injuries and poisonings	180,765	Complication of pregnancy, childbirth & the puerperium	388,435
Skin and subcutaneous tissue diseases	159,559	Endocrine, nutritional and metabolic disorders	259,397
Circulatory system diseases	154,247	Genitourinary system diseases	258,332
Endocrine, nutritional and metabolic disorders	141,922	Musculoskeletal system diseases	219,356
Musculoskeletal system diseases	128,150	Symptoms, signs, & ill-defined conditions	210,877
Symptoms, signs, & ill-defined conditions	123,702	Skin and subcutaneous tissue diseases	201,912
Mental disorders	109,013	Circulatory system diseases	179,345

SOURCE: Direct: Annual Report 1C
Contract: Annual Report 3A

Chart 5.16

***Percent Distributions for
Population and Patient
Care Workloads, FY 1992***

Indian children under 1 year of age comprise 1.8 percent of the Indian Health Service user population but have 5.4 percent of the outpatient clinical impressions, 6.9 percent of the inpatient discharges, and 6.3 percent of the inpatient days.

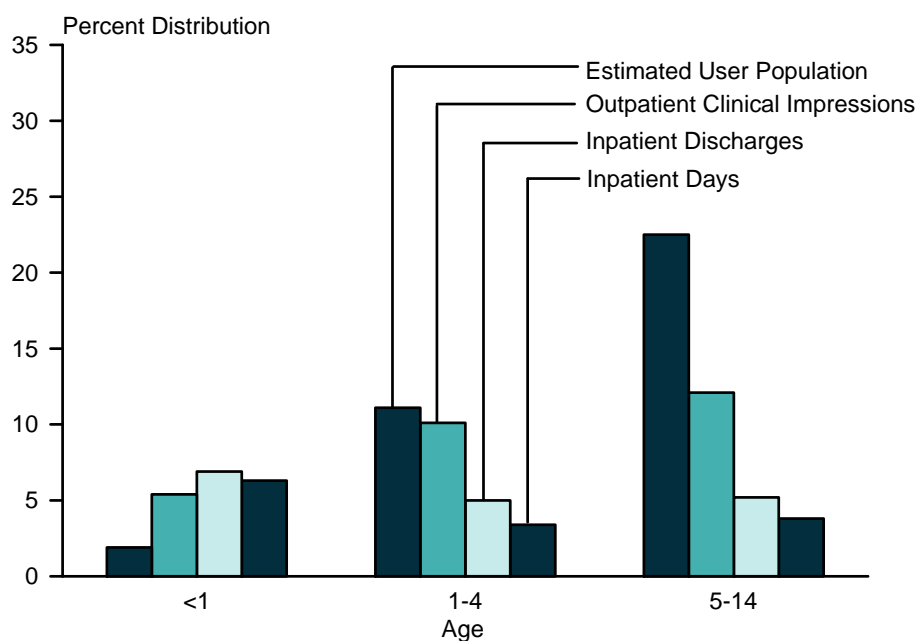


Chart 5.17

Percent Distributions for Population and Patient Care Workloads, FY 1992

Indian adults over age 64 comprise 5.5 percent of the Indian Health Service user population but have 10.6 percent of the outpatient clinical impressions, 13.9 percent of the inpatient discharges, and 21.1 percent of the inpatient days.

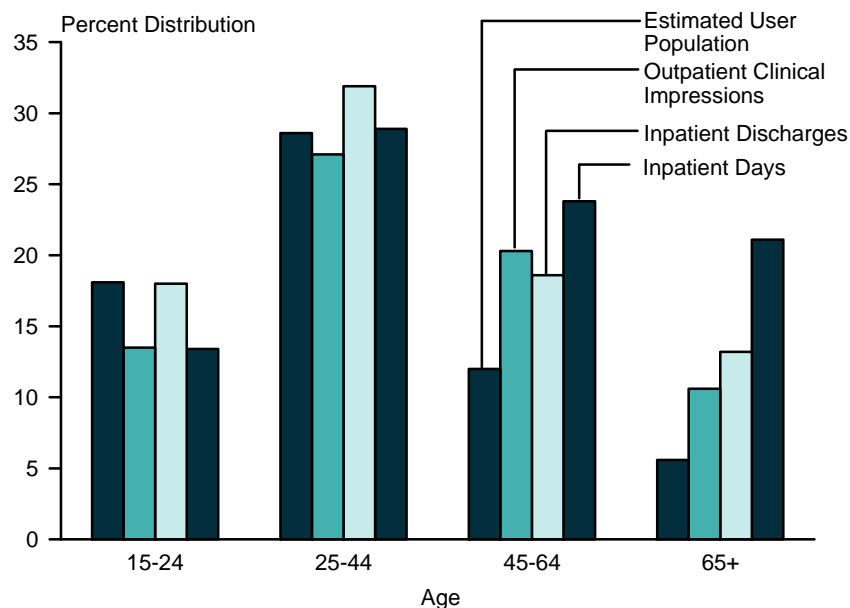


Table 5.16

Percent Distributions for Estimated Population, Outpatient Clinical Impressions, and Inpatient Discharges and Days, Fiscal Year 1992

Distribution	Age							
	All Ages	Under 1 Year	1. 4 Years	5. 14 Years	15. 24 Years	25. 44 Years	45. 64 Years	65 Years & Over
Estimated user population	100.0	1.8	11.0	22.6	18.1	28.7	12.2	5.5
Outpatient clinical impressions	100.0	5.4	10.1	12.1	13.5	27.9	20.3	10.6
Inpatient discharges	100.0	6.9	5.2	5.3	18.0	31.9	18.8	13.9
Inpatient days	100.0	6.3	3.5	3.8	12.3	28.5	24.5	21.1

Chart 5.18

Percent Distribution of Outpatient Visits by Type of Provider, Indian Health Service and Tribal Direct Facilities (FY 1993)

For 48 percent of outpatient visits to Indian Health Service and Tribal facilities in FY 1993, the patient was seen by a physician. For 15 percent, the primary provider was a pharmacist.

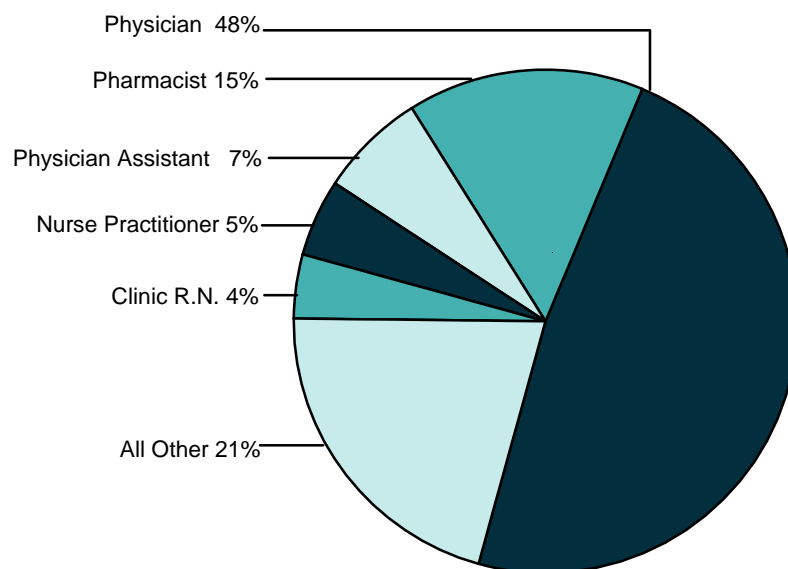


Table 5.18

Number of Outpatient Visits by Type of Provider

Indian Health Service and Tribal Direct Facilities, FY 1993

Type of Provider	Number of Outpatient Visits	Percent of Total
Total, All Providers	5,532,902	100.0
Primary Care Providers	3,563,403	64.4
Physician	2,665,769	48.2
Physician Assistant	365,357	6.6
Nurse Practitioner	285,714	5.2
Contract Physician	86,974	1.6
Nurse Midwife	54,526	1.0
Tribal Physician	52,060	0.9
All Other	53,003	1.0
Other Providers	1,969,499	35.6
Pharmacist	854,576	15.4
Clinic R.N.	229,347	4.1
Optometrist	153,032	2.8
Public Health Nurse	99,970	1.8
Licensed Practical Nurse	90,111	1.6
Physical Therapist	54,701	1.0
All Other	487,762	8.8

SOURCE: Annual Report 1A

Chart 5.19

Trend in Average Daily Patient Load, IHS and Tribal Direct and Contract Hospitals

IHS services shifted away from inpatient care as demonstrated by the decline in average daily patient load (ADPL) between 1980 and 1992. However, the Tribal portion of total ADPL increased from 1 to 15 percent during that time period.

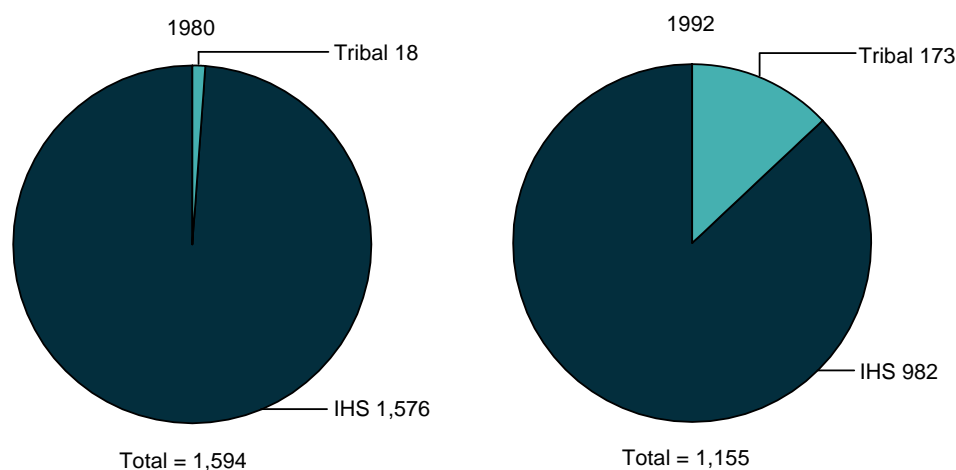


Chart 5.20

Trend in Number of Outpatient Visits, IHS and Tribal Direct and Contract Facilities

While inpatient services declined, outpatient services increased 46 percent between 1980 and 1992. Also, the Tribal portion of total outpatient visits increased from 8 to 28 percent during that time period.

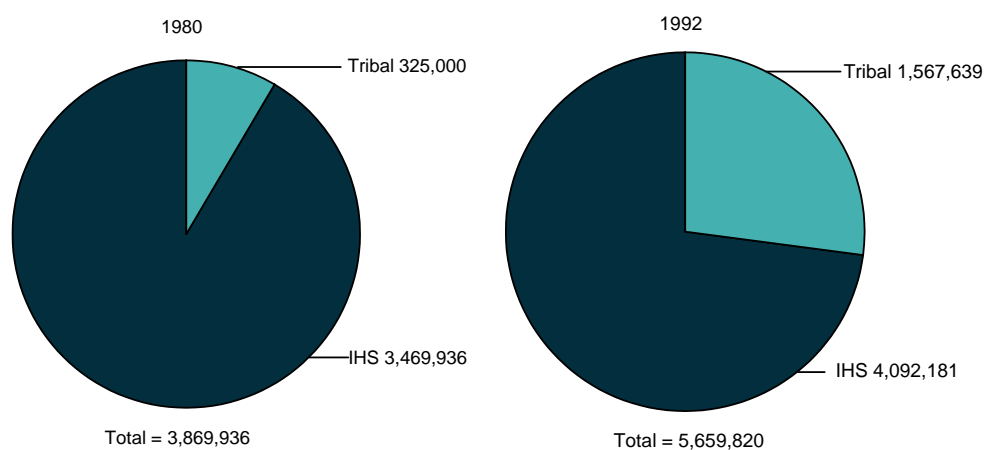


Chart 5.21

Trend in Preventive Outpatient Visits, IHS and Tribal Direct and Contract Facilities

IHS services related to preventive care have increased 70 percent over the last decade. In 1992, the largest single category of preventive clinical impressions was prenatal care, 23 percent of the preventive total. These are conservative estimates since preventive activities also occur during visits reported for other causes.

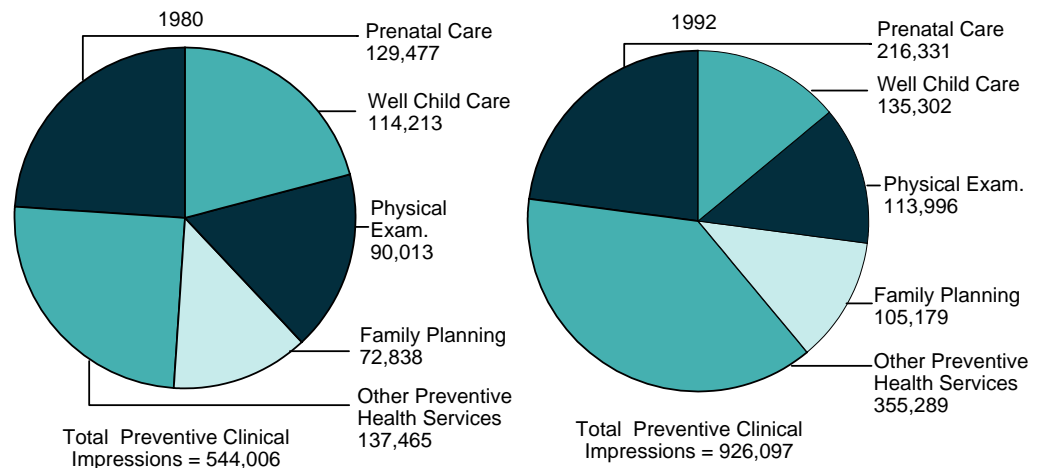


Chart 5.22

Dental Services Provided

The number of direct and contract dental services provided by Indian Health Service, Tribal, and Urban Programs has increased 263 percent since FY 1970. In FY 1993, nearly 2.7 million dental services were provided.

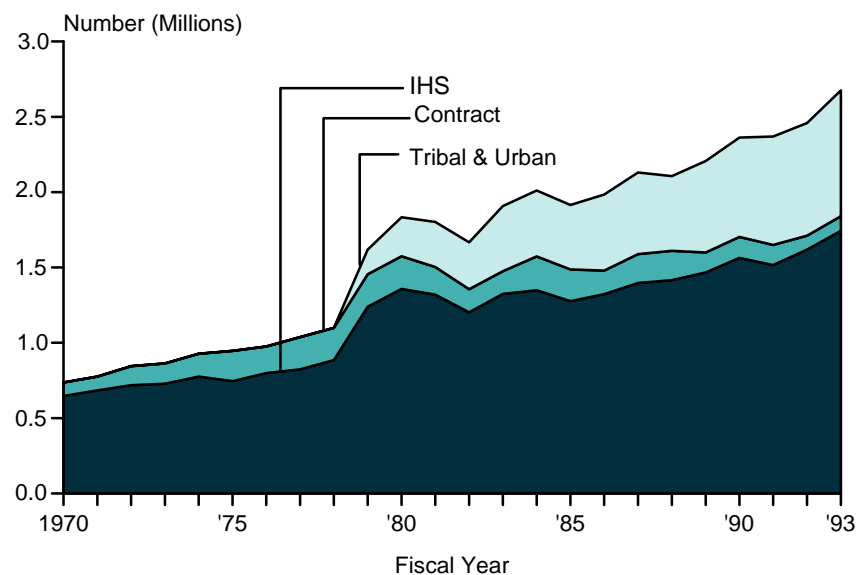


Chart 5.23

Dental Services Provided by Tribal/Urban Programs

The number of dental services provided by Tribal and Urban Programs has increased 411 percent since FY 1979. In FY 1993, they comprised 31.2 percent of the total dental services provided, as compared to 10.1 percent in FY 1979.

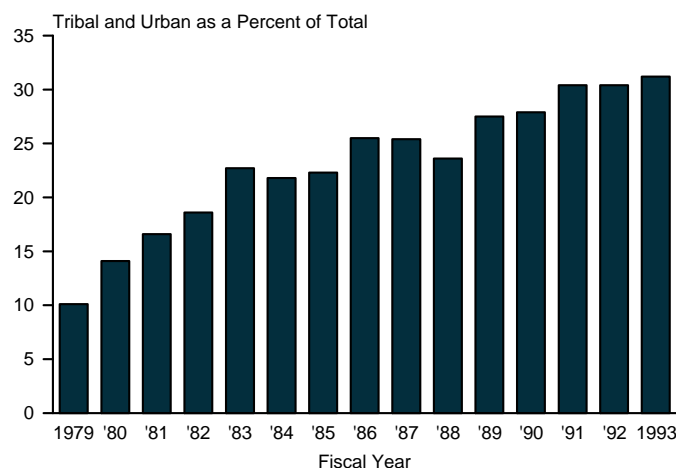


Table 5.22

Number of Dental Services Provided

IHS, Contract, Tribal and Urban Programs, FY 1955–1993

Fiscal Year	Number of Services Provided			Tribal & Urban	% Contract of Total	% Tribal & Urban of Total	% Increase of Total Since 1955
	Total	IHS	Contract ¹				
		Direct					
1993	2,675,525	1,742,936	97,897	834,692	3.7	31.2	1,386.4
1992	2,458,811	1,618,679	92,447	747,685	3.8	30.4	1,266.0
1991	2,369,484	1,516,233	133,253	719,998	5.6	30.4	1,216.4
1990	2,362,228	1,563,934	139,425	658,869	5.9	27.9	1,212.3
1989	2,207,082	1,466,812	132,918	607,352	6.0	27.5	1,126.2
1988	2,106,741	1,415,815	194,784	496,142	9.2	23.6	1,070.4
1987	2,130,690	1,397,262	191,639	541,789	9.0	25.4	1,083.7
1986	1,984,522	1,322,794	155,939	505,789	7.9	25.5	1,002.5
1985	1,914,820	1,276,623	210,508	427,689	11.0	22.3	963.8
1984	2,011,326	1,348,599	224,918	437,809	11.2	21.8	1,017.4
1983	1,907,336	1,325,187	149,741	432,408	7.9	22.7	959.6
1982	1,666,263	1,202,422	153,030	311,341	9.2	18.6	825.7
1981	1,801,982	1,319,913	182,880	299,189	10.1	16.6	901.1
1980	1,833,206	1,357,809	216,574	258,823	11.8	14.1	918.4
1979 ²	1,618,383	1,239,108	215,997	163,278	13.3	10.1	799.1
1978	1,099,019	885,019	214,000		19.5		510.6
1977	1,037,640	823,328	214,312		20.7		476.5
1976	975,647	798,709	176,938		18.1		442.0
1975	946,722	745,831	200,891		21.2		426.0
1974	927,701	775,747	151,954		16.4		415.4
1973	863,057	728,909	134,148		15.5		379.5
1972	844,724	718,176	126,548		15.0		369.3
1971	776,168	684,612	91,556		11.8		331.2
1970	737,206	646,580	90,626		12.3		309.6
1969	703,232	634,479	68,753		9.8		290.7
1968	681,745	613,084	68,661		10.1		278.7
1967	626,458	545,509	80,949		12.9		248.0
1966 ²	570,779	502,710	60,069		11.9		217.1
1965	572,079	495,006	77,073		13.5		217.8
1964	525,010	462,981	62,029		11.8		191.7
1963	453,906	398,452	55,454		12.2		152.2
1962	421,597	364,988	56,609		13.4		134.2
1961	403,528	348,776	54,752		13.6		124.2
1960 ²	364,423	307,248	57,175		15.7		102.5
1959	328,613	283,206	45,407		13.8		82.6
1958	282,372	282,372	.		.		56.9
1957	249,048	249,048	.		.		38.4
1956	219,353	219,353	.		.		21.9
1955	180,000	180,000	.		.		.

¹ Beginning with FY 1979 this category excludes contract services purchased from the private sector by Tribes.

² Data systems were modified in 1960, 1966 and 1978. In 1978 the IHS began to use the dental services coding list adopted by the American Dental Association (ADA). The ADA list identifies individual clinical services. Previously the IHS had reported specified clinical services combined into major dental service groupings. Excluded from the 1978 count are diagnostic and adjunctive services. Excluded from the clinical counts since 1979 are diagnostic services other than examinations, revisits and non-clinical adjunctive services.

Chart 5.24

Trend in Community Water Systems Monitoring Fluoridation

Steady progress in maintaining at least minimally-acceptable levels of fluoride in community water systems has occurred since FY 1985. There are approximately 1,200 community water systems on reservations serving American Indian and Alaska Native people. In FY 1993, 664 water systems delivered fluoride for the entire year; of those systems, 525 were in compliance. A water system is considered to be in compliance for the year if the monthly water sample is in the optimal fluoride range. Optimally- fluoridated systems provide the dental benefits of this cost- effective public health measure to about 40 percent of the Indian population. Increasing the number of optimally-fluoridated water systems is a high priority for the IHS Dental and Office of Environmental Health and Engineering Programs.

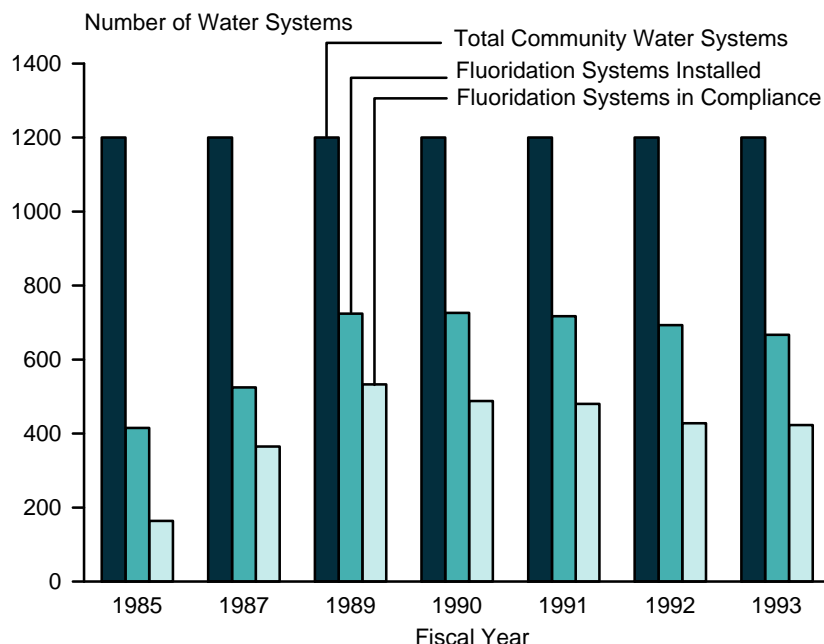
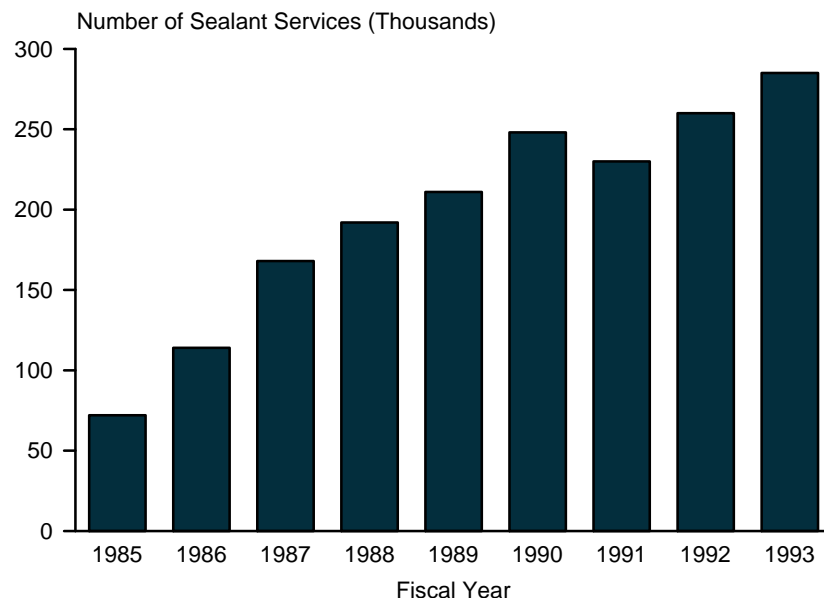
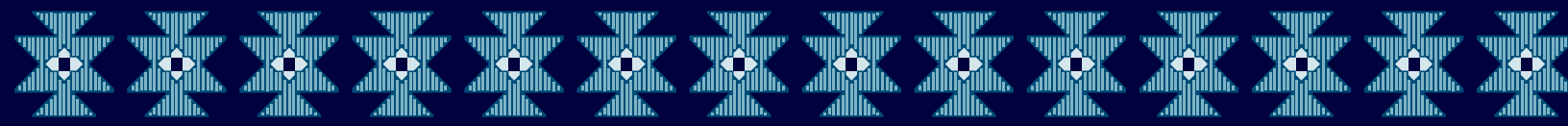


Chart 5.25

Annual Preventive Sealant Usage in IHS and Tribal Dental Programs, FY 1985-1993

Since FY 1985, there has been a dramatic increase in dental sealant usage. In FY 1985, there were only about 73,000 sealant services while in FY 1993 there were more than 291,000.





PART 6 – COMMUNITY HEALTH STATISTICS

Chart 6.1

Age-Adjusted Drug-Related Death Rates

The age-adjusted drug-related death rate for American Indians and Alaska Natives increased from 3.4 deaths per 100,000 population in 1979-1981 to 4.3 in 1989-1991. The U.S. All Races rate for 1990 was 3.5.

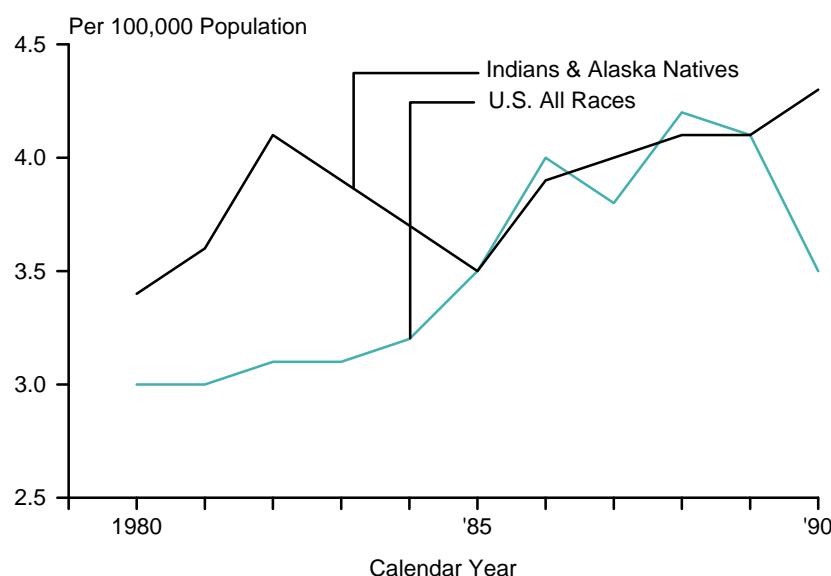


Table 6.1

Drug-Related Deaths and Mortality Rates

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1979-1991

Age-Adjusted Rate per 100,000 Population

Calendar Years(s)	Indian and Alaska Native		U.S. All Races		U.S. White Rate	Ratio Indian to:	
	Number	Rate	Number	Rate		All Races	U.S. White
1989. 1991 (1991)	50						
1989. 1991 (1990)	48	4.3	9,441	3.5	3.3	1.2	1.3
1988. 1990 (1989)	45	4.1	10,692	4.1	3.7	1.0	1.1
1987. 1989 (1988)	36	4.1	10,882	4.2	3.8	1.0	1.1
1986. 1988 (1987)	45	4.0	9,760	3.8	3.4	1.1	1.2
1985. 1987 (1986)	39	3.9	9,941	4.0	3.7	1.0	1.1
1984. 1986 (1985)	34	3.5	8,628	3.5	3.2	1.0	1.1
1983. 1985 (1984)	27	3.7	7,895	3.2	2.9	1.2	1.3
1982. 1984 (1983)	40	3.9	7,468	3.1	2.9	1.3	1.3
1981. 1983 (1982)	30	4.1	7,286	3.1	2.9	1.3	1.4
1980. 1982 (1981)	27	3.6	7,068	3.0	2.9	1.2	1.2
1979. 1981 (1980)	25	3.4	6,881	3.0	2.9	1.1	1.2
(1979)	27						

NOTE: Includes deaths caused by drug dependence. 304, nondependent abuse of drugs excluding alcohol and tobacco. 305.2, 305.9, accidental poisoning by drugs, medicinal substances and biologicals. E850, E858, suicide by drugs. E950.0, E950.5, and injury by drugs. E980.0, E980.5. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified.

Chart 6.2

Drug-Related Death Rates by Age and Sex, Indians and Alaska Natives (1989–1991)

The age-specific drug-related death rate (1989–1991) for Indian males was highest for age group 25 to 34 years (11.7 deaths per 100,000 population). The highest age-specific rate for Indian females occurred in the age group 45 to 54 years (8.0).

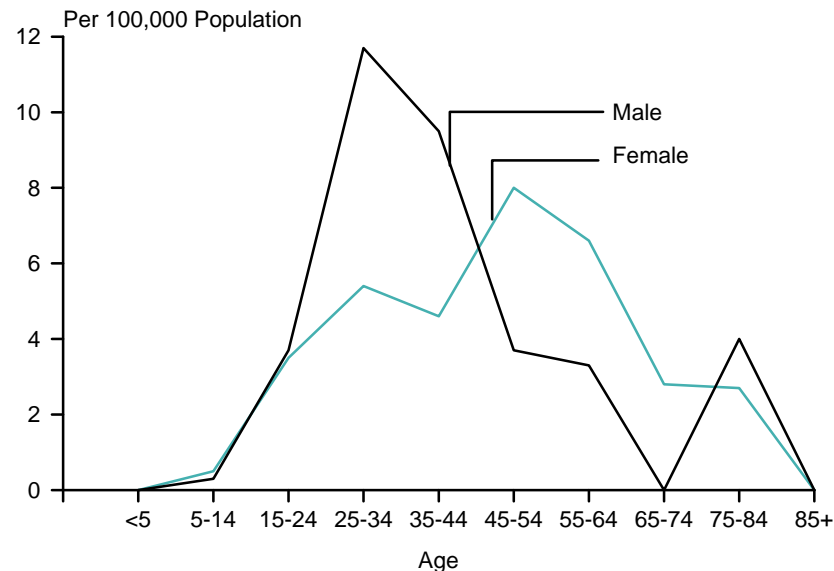


Table 6.2

Drug-Related¹ Mortality Rates by Age and Sex

American Indians and Alaska Natives, IHS Service Area, 1989–1991, and U.S. All Races and White Populations, 1990

Rate per 100,000 Population

Age Group	Indian and Alaska Native		
	Both Sexes	Male	Female
Under 5 years	.	.	.
5-14 years	0.4	0.3	0.5
15-24 years	3.6	3.7	3.5
25-34 years	8.5	11.7	5.4
35-44 years	7.0	9.5	4.6
45-54 years	5.9	3.7	8.0
55-64 years	5.1	3.3	6.6
65-74 years	1.6	.	2.8
75-84 years	3.2	4.0	2.7
85 years+	.	.	.

Age Group	U.S. All Races		
	Both Sexes	Male	Female
Under 5 years	0.2	0.2	0.3
5-14 years	0.1	0.1	0.1
15-24 years	1.9	2.3	1.5
25-34 years	6.4	9.0	3.8
35-44 years	8.1	11.5	4.9
45-54 years	4.5	5.1	4.0
55-64 years	3.2	3.0	3.4
65-74 years	2.8	2.9	2.7
75-84 years	3.4	3.6	3.3
85 years+	6.9	7.5	6.6

Age Group	U.S. White		
	Both Sexes	Male	Female
Under 5 years	0.2	0.2	0.2
5-14 years	0.1	0.1	0.1
15-24 years	1.8	2.2	1.4
25-34 years	6.1	8.7	3.4
35-44 years	7.4	10.1	4.6
45-54 years	4.2	4.3	4.1
55-64 years	3.2	2.7	3.6
65-74 years	2.8	2.9	2.8
75-84 years	3.5	3.7	3.5
85 years+	6.8	7.2	6.7

¹ Includes deaths with ICD-9 codes 304, 305.2 to 305.9, E850, E858, E950.0, E950.5, and E980.0, E980.5.

NOTE: . Represents zero.

Chart 6.3

**Alcohol-Related
Discharge Rates
(First-Listed Diagnosis),
IHS and Tribal Direct
and Contract General
Hospitals, FY 1992 and
U.S. General Short-Stay
Hospitals, CY 1992**

In FY 1992, the total alcohol-related discharge rate (first diagnosis) for IHS and Tribal direct and contract general hospitals was 37.0 per 10,000 user population aged 15 years and older. This is nearly double the CY 1992 rate of 19.0 for U.S. general short-stay hospitals.

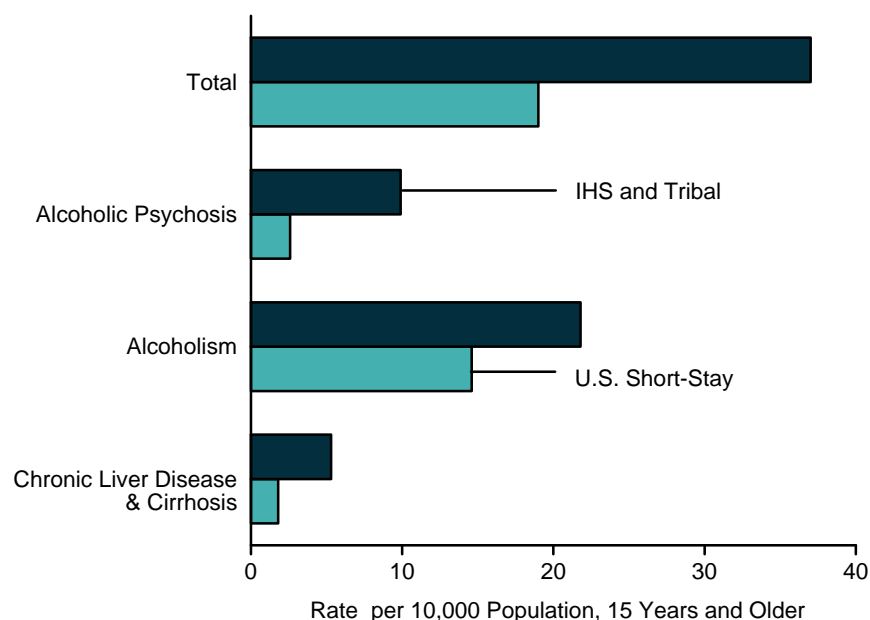


Table 6.3

**Number and Rate for
Discharges with a
First-Listed Diagnosis of
Alcoholism for Persons 15
Years Old and Older**

IHS and Tribal Direct and Contract General Hospitals, FY 1992, and U.S. General Short-Stay Hospitals, CY 1992

First Listed Diagnosis	IHS and Tribal Hospitals		U.S. General Short-Stay Hospitals	
	Number	Rate	Number (thousands)	Rate
Total	2,743	37.0	376	19.0
Alcoholic psychosis (ICD-9-CM 291)	735	9.9	51	2.6
Alcoholism (ICD-9-CM 303, 305.0)	1,616	21.8	289	14.6
Chronic liver disease and cirrhosis, specified as alcoholic (ICD-9-CM 571.0, 571.3)	392	5.3	36	1.8

NOTE: Rate is number of discharges per 10,000 population aged 15 years and older.

SOURCES: U.S.. National Center for Health Statistics, DHHS, unpublished data

IHS. Annual Reports 2C and 3I

Chart 6.4

Environmental Health Services Provided, FY 1987–1993

Since FY 1987, the number of environmental health services provided has increased 30 percent. In FY 1993, over 160 thousand services were provided.

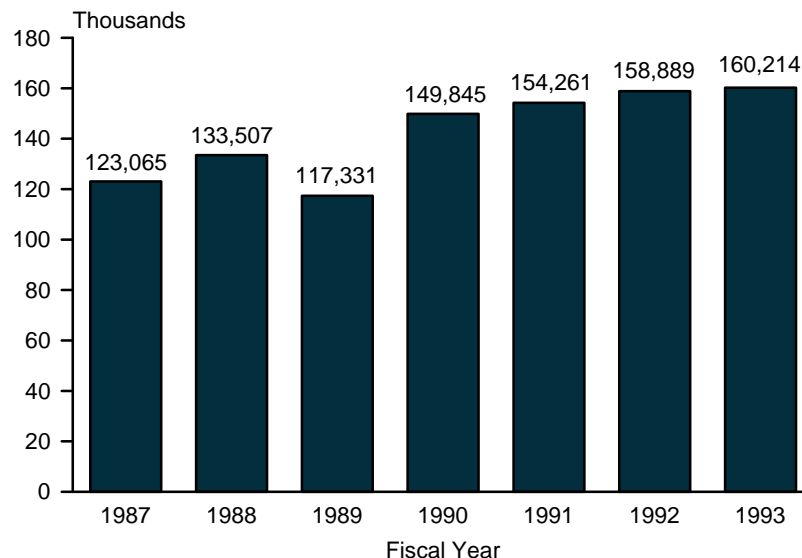


Chart 6.5

Leading Environmental Health Services Provided, FY 1993

In FY 1993, the leading environmental health service provided was for the category of injury prevention (44 percent of all services). This was followed by vector control (18 percent) and water supply (11 percent). The increase in vector control services over prior years is the result of activities associated with the Hanta virus outbreak in FY 1993.

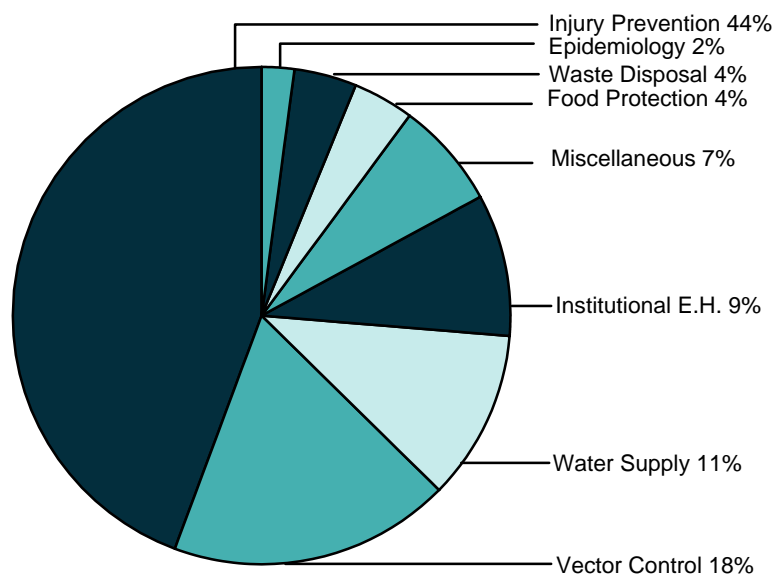


Chart 6.6

***Injury Prevention
Services, FY 1987-1993***

Since FY 1987, injury prevention services provided by Environmental Health Services Branch staff have increased by 273 percent. In FY 1993, nearly 71,000 services were provided.

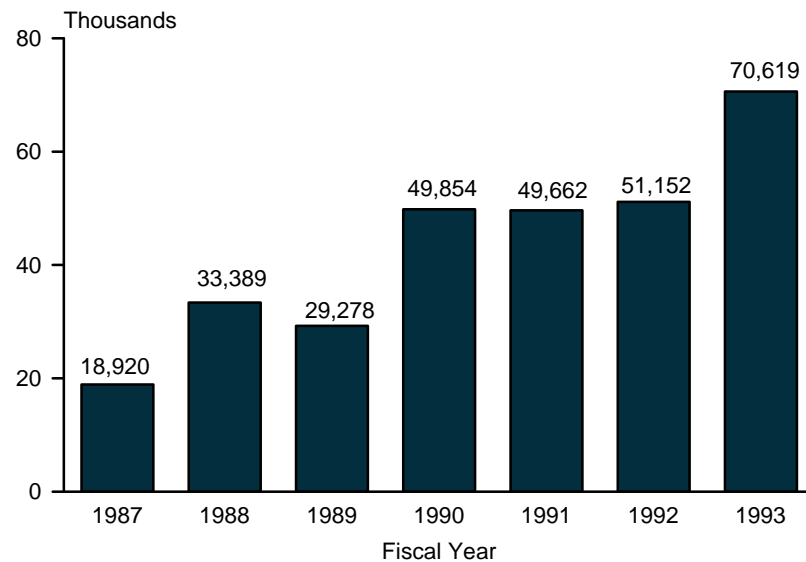


Chart 6.7

***Hospitalizations for
Injuries and Poisonings,
IHS and Tribal Direct
and Contract General
Hospitals, FY 1987-1992***

Since FY 1987, the number of discharges for injuries and poisonings from IHS and Tribal direct and contract general hospitals has decreased over 17 percent. In FY 1992, there were under 9,000 discharges.

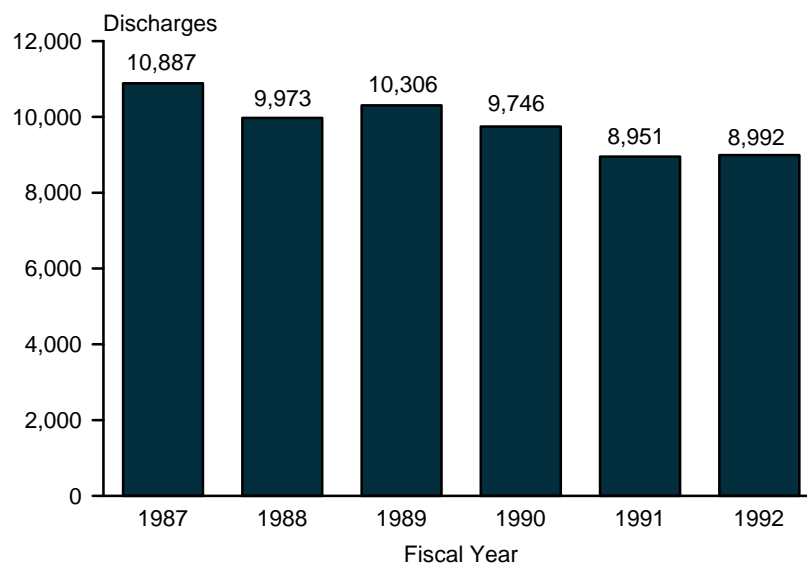


Chart 6.8

Age-Adjusted Motor Vehicle Death Rates for Males

The age-adjusted motor vehicle death rate for American Indian and Alaska Native males has decreased 54 percent since 1972-1974. In 1989-1991, the Indian male rate was 71.0 deaths per 100,000 population compared with 26.3 for U.S. All Races males, a ratio of 2.7 to 1.

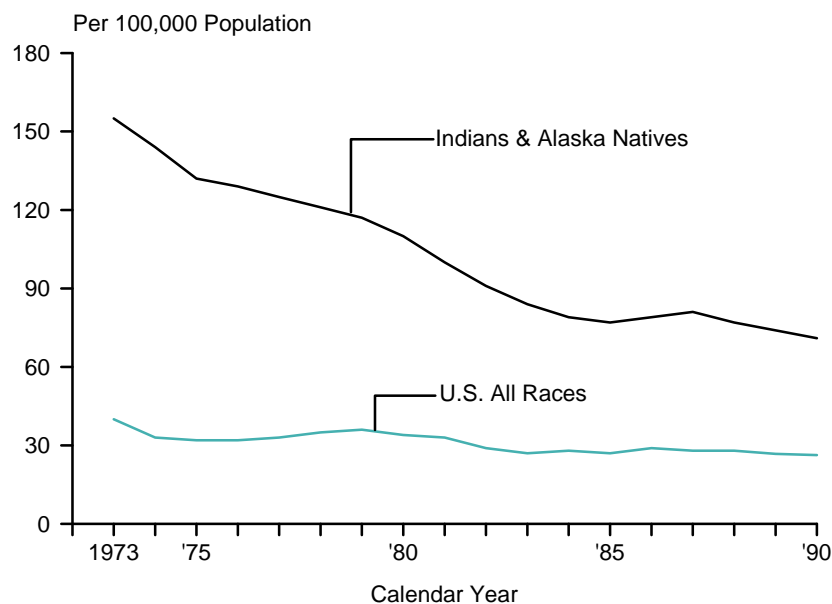


Table 6.8

Motor Vehicle Deaths and Mortality Rates for Males

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1991

Age-Adjusted Rate per 100,000 Population

Calendar Years(s)	Indian and Alaska Native		U.S. All Races		U.S. White Rate	Ratio Indian to:	
	Number	Rate	Number	Rate		All Races	U.S. White
(1991)	393						
1989. 91 (1990)	399	71.0	32,406	26.3	26.3	2.7	2.7
1988. 90 (1989)	381	73.7	32,704	26.8	26.8	2.8	2.8
1987. 89 (1988)	410	77.4	34,258	28.3	28.5	2.7	2.7
1986. 88 (1987)	423	80.6	33,904	28.1	28.4	2.9	2.8
1985. 87 (1986)	395	79.2	34,088	28.5	28.7	2.8	2.8
1984. 86 (1985)	354	77.4	32,443	27.3	27.6	2.8	2.8
1983. 85 (1984)	351	78.7	32,949	28.0	28.4	2.8	2.8
1982. 84 (1983)	358	84.1	31,907	27.4	27.8	3.1	3.0
1981. 83 (1982)	362	90.9	33,191	28.7	29.3	3.2	3.1
1980. 82 (1981)	405	100.2	37,533	32.7	33.4	3.1	3.0
1979. 81 (1980)	429	109.9	38,861	34.3	34.8	3.2	3.2
1978. 80 (1979)	448	117.0	39,309	35.8	36.2	3.3	3.2
1977. 79 (1978)	431	120.8	38,139	35.1	35.2	3.4	3.4
1976. 78 (1977)	416	125.0	35,804	33.3	33.2	3.8	3.8
1975. 77 (1976)	413	129.2	34,049	32.1	31.8	4.0	4.1
1974. 76 (1975)	419	131.9	33,597	32.2	31.7	4.1	4.2
1973. 75 (1974)	357	144.4	34,133	33.2	32.8	4.3	4.4
1972. 74 (1973)	443	154.8	39,941	39.3	38.4	3.9	4.0
(1972)	399						
1954. 56 (1955)	NA	NA	28,803	38.4	37.8	NA	NA

NOTE: NA denotes data not available. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified.

Chart 6.9

Age-Adjusted Motor Vehicle Death Rates for Females

The age-adjusted motor vehicle death rate for American Indian and Alaska Native females has decreased 53 percent since 1972-1974. In 1989-1991, the Indian female rate was 2.5 times the rate for U.S. All Races females, 26.9 compared with 10.7 deaths per 100,000 population.

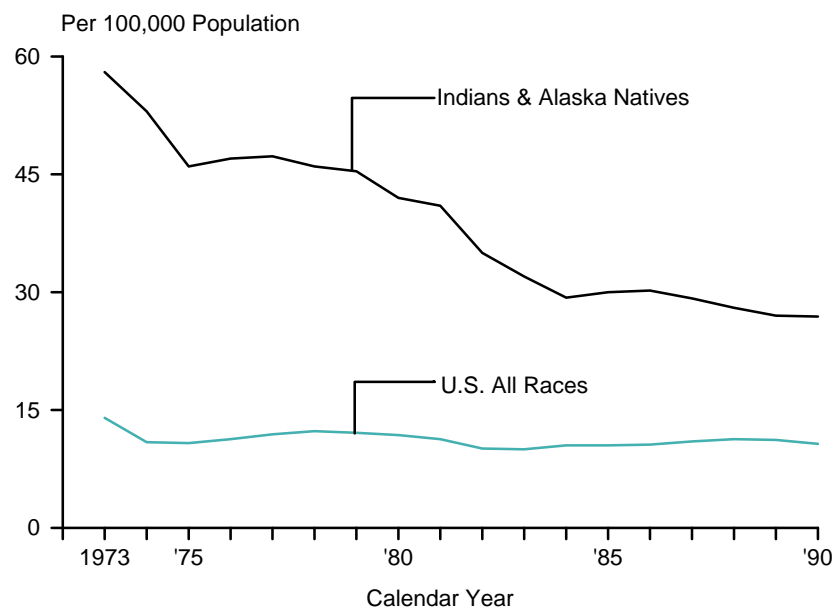


Table 6.9

Motor Vehicle Deaths and Mortality Rates for Females

American Indians and Alaska Natives, IHS Service Area, and U.S. All Races and White Populations, 1955-1991
Age-Adjusted Rate per 100,000 Population

Calendar Years(s)	Indian and Alaska Native		U.S. All Races		U.S. White Rate	Ratio Indian to:	
	Number	Rate	Number	Rate		All Races	U.S. White
(1991)	165						
1989. 1991 (1990)	149	26.9	14,408	10.7	11.0	2.5	2.4
1988. 1990 (1989)	155	26.8	14,871	11.2	11.5	2.4	2.3
1987. 1989 (1988)	155	27.7	14,820	11.3	11.6	2.5	2.4
1986. 1988 (1987)	151	29.2	14,386	11.0	11.4	2.7	2.6
1985. 1987 (1986)	171	30.2	13,777	10.6	11.0	2.8	2.7
1984. 1986 (1985)	154	30.0	13,458	10.5	10.8	2.9	2.8
1983. 1985 (1984)	134	29.3	13,314	10.5	10.9	2.8	2.7
1982. 1984 (1983)	140	31.6	12,545	10.0	10.3	3.2	3.1
1981. 1983 (1982)	168	35.1	12,588	10.1	10.5	3.5	3.3
1980. 1982 (1981)	165	40.6	13,852	11.3	11.7	3.6	3.5
1979. 1981 (1980)	193	42.0	14,311	11.8	12.3	3.6	3.4
1978. 1980 (1979)	168	45.4	14,215	12.1	12.6	3.8	3.6
1977. 1979 (1978)	175	46.0	14,272	12.3	12.6	3.7	3.7
1976. 1978 (1977)	177	47.3	13,706	11.9	12.2	4.0	3.9
1975. 1977 (1976)	156	47.0	12,989	11.3	11.5	4.2	4.1
1974. 1976 (1975)	151	46.2	12,256	10.8	10.9	4.3	4.2
1973. 1975 (1974)	138	53.0	12,269	10.9	11.0	4.9	4.8
1972. 1974 (1973)	184	57.8	15,570	14.0	14.0	4.1	4.1
(1972)	158						
1954. 1956 (1955)	NA	NA	9,623	11.6	11.4	NA	NA

NOTE: NA denotes data not available. American Indian and Alaska Native rates are for the 3-year periods specified. Numbers of deaths and U.S. rates are for the single year specified.

Chart 6.10

**Indian Health Service
Nutrition and Dietetics
Trend in Patient/Client
Contacts by Nutrition
Function**

The number of patient/client contacts made by the nutrition and dietetics program increased 23 percent from FY 1992 to FY 1993. During this time period, program resources remained essentially the same, but there was about a 5 percent increase in the number of staff using the reporting system, an increase in general nutrition contacts for health promotion, and an increase in ongoing and follow-up visits. General nutrition contacts and ongoing and follow-up visits are less complex and less time-consuming than visits for rehabilitative and therapeutic nutrition.

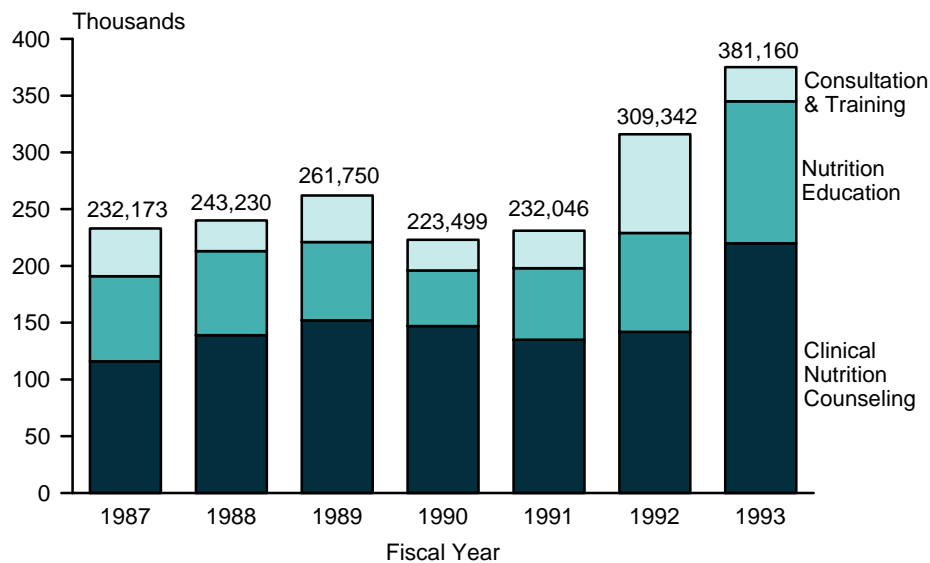


Chart 6.11

**Indian Health Service
Nutrition and Dietetics—
Percent of Contacts by
Setting, FY 1993**

The Indian Health Service nutrition and dietetics program made over 381,000 patient/client contacts during FY 1993. The majority of the contacts were in the community (40 percent) and the hospital (38 percent).

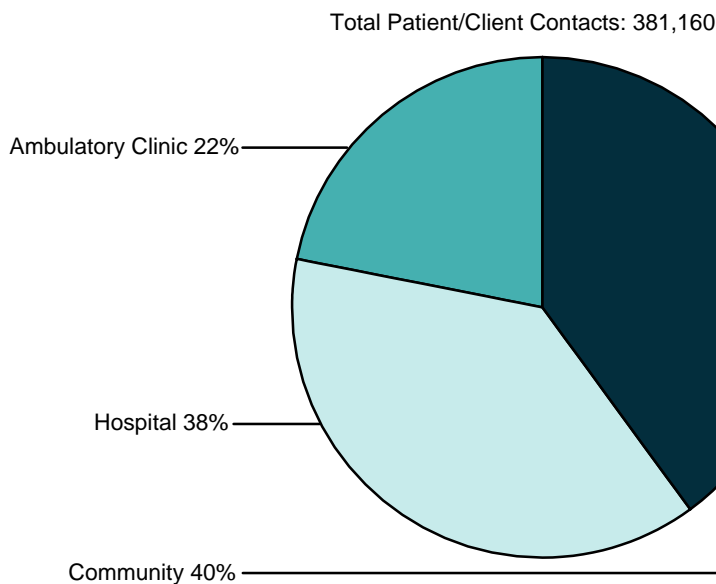


Chart 6.12

**Indian Health Service
Nutrition and Dietetics—
Percent of Contacts by
Nutrition Function,
FY 1993**

Over half (56 percent) of the nutrition and dietetics program contacts during FY 1993 were for clinical nutrition counseling and over one-third (36 percent) were for health promotion.

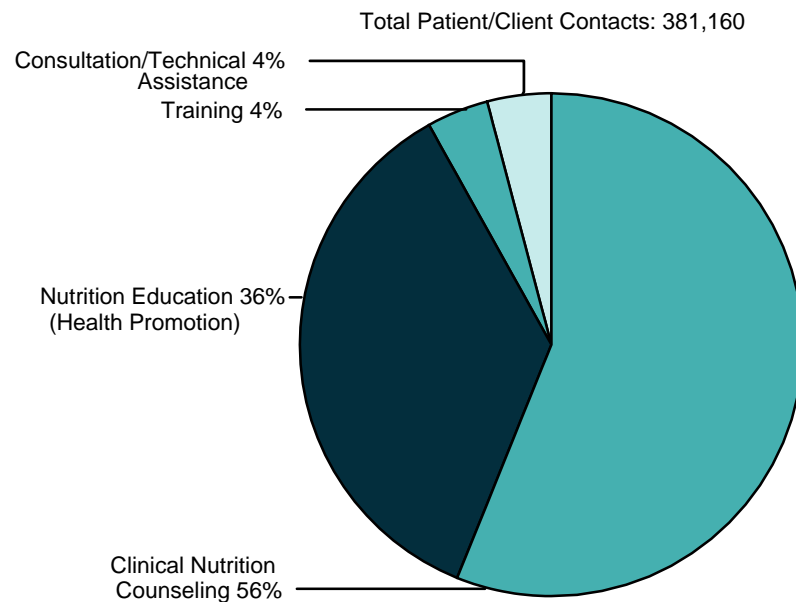


Chart 6.13

**Indian Health Service
Nutrition and Dietetics—
Percent of Contacts by
Type of Encounter,
FY 1993**

For the nutrition and dietetics program in FY 1993, ongoing counseling accounted for 57 percent of the encounters, first visits and follow-up accounted for 29 percent of the encounters, and series of classes accounted for 14 percent.

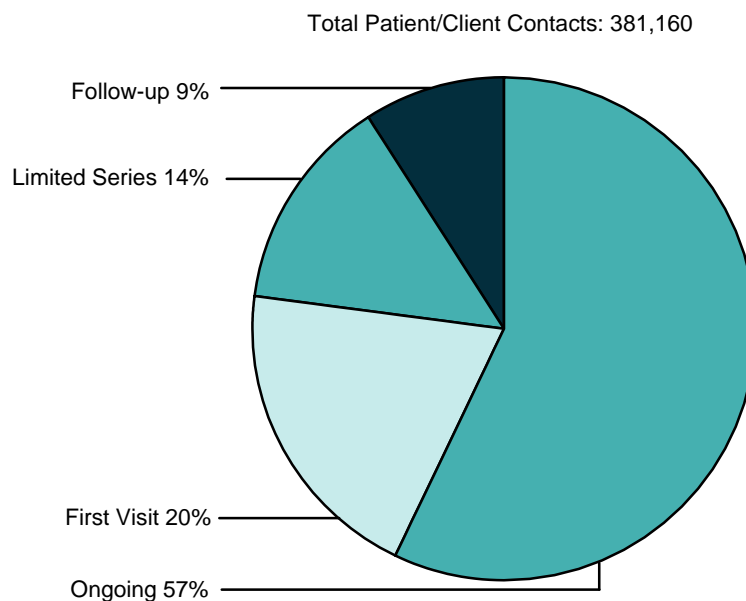


Table 6.11

Nutrition and Dietetics
Patient/Client Contacts

By Setting, Function, and
Encounter, FY 1993

	Patient/Client Contacts ¹	
	Number	Percent Distribution
Setting		
Total Patient/Client Contacts	381,160	100.0
Community	149,850	39.7
Hospital	144,329	37.9
Ambulatory Clinic	85,394	22.4
Nutrition Function		
Total Patient/Client Contacts	381,160	100.0
Clinical Nutrition Counseling	215,051	56.4
Nutrition Education/Health Promotion	135,680	35.6
Training for IHS and Tribal Staff	16,791	4.4
Consultation/Technical Assistance	13,638	3.6
Encounter		
Total Patient/Client Contacts	381,160	100.0
Ongoing	217,544	57.1
First Visit	75,364	19.8
Limited Series	52,701	13.8
Follow-up	35,551	9.3

¹ Excludes activities that are not direct patient/client services, and activities associated with program planning, administration, evaluation, and continuing education.

Chart 6.14

Leading Clinical Nutrition Patient/Client Contacts, FY 1993

Of the clinical nutrition counseling contacts made by the nutrition and dietetics program in FY 1993, the majority were for general nutrition (39 percent) and diabetes (26 percent) nutrition counseling.

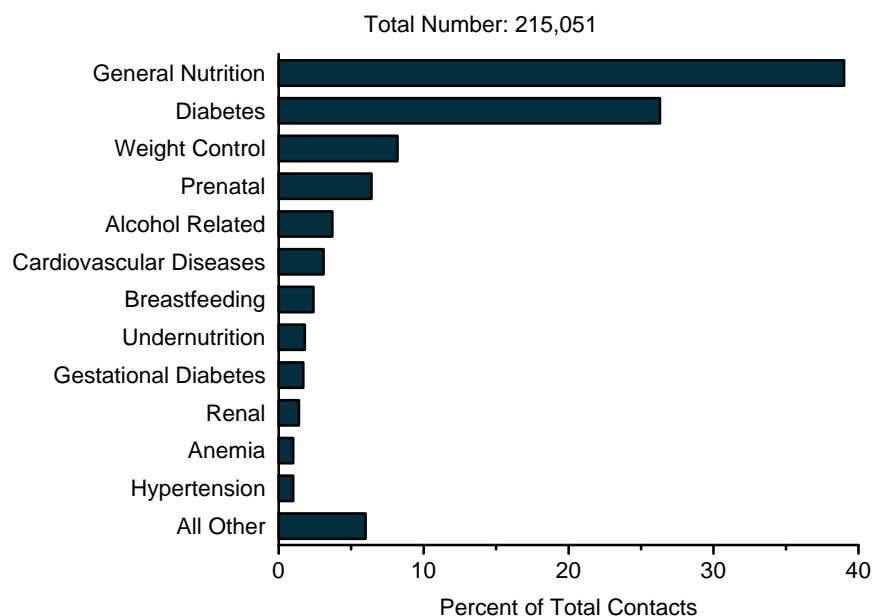


Table 6.14

Leading Clinical Nutrition Patient/Client Contacts, FY 1992

Purpose	Number	Percent Distribution
Total Contacts ¹	215,051	100.0
General Nutrition	83,966	39.0
Diabetes	56,629	26.3
Weight Control	17,679	8.2
Prenatal	13,801	6.4
Alcohol Related	8,072	3.7
Cardiovascular Disease ²	6,763	3.1
Breastfeeding	5,214	2.4
Undernutrition	3,863	1.8
Gestational Diabetes	3,758	1.7
Renal ³	3,127	1.4
Anemia	2,227	1.0
Hypertension	2,223	1.0
All Other	12,937	6.0

¹ Excludes activities that are not direct patient/client services, and activities associated with program planning, administration, evaluation, and continuing education.

² Formerly .Fat Controlled..

³ Formerly .Sodium..

Note: Percentages do not sum to 100.0 due to rounding.

Chart 6.15

**Indian Health Service
Public Health Nursing—
Percent of Visits by
Program Area, FY 1993**

There were approximately 250,000 public health nursing visits recorded in the Headquarters reports for FY 1993. The most frequent program areas dealt with during these visits were morbidity (30 percent of the visits), health promotion/disease prevention (23 percent), and child health (12 percent).

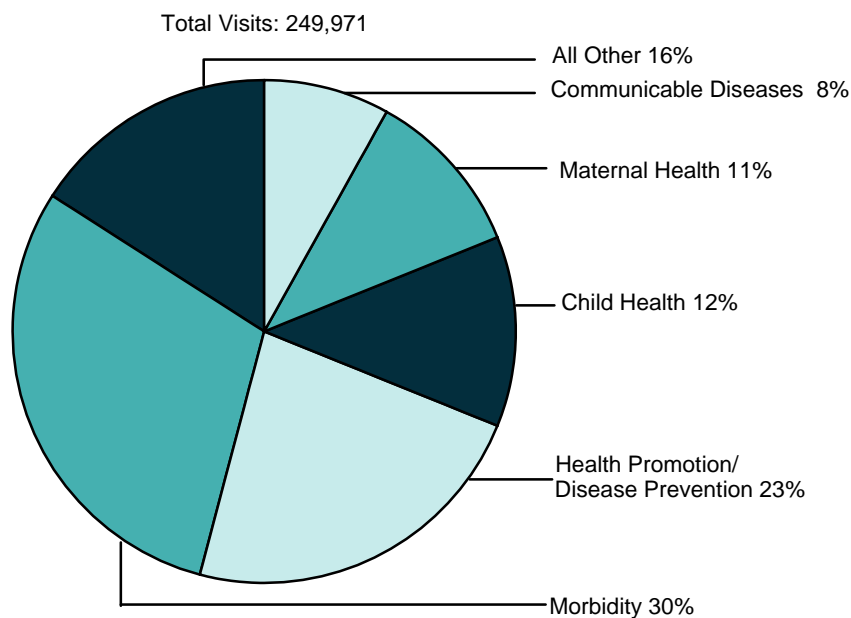


Table 6.15

**IHS Public Health
Nursing Visits by
Program Area, FY 1993**

Program Area	Number of Visits	Percent Distribution
Total Visits	249,971	100.0
Morbidity	76,100	30.4
Health Promotion/Disease Prevention	57,430	23.0
Child Health	30,710	12.3
Maternal Health	26,172	10.5
Communicable Disease	20,486	8.2
Mental Health	7,488	3.0
School Health	5,597	2.2
Accidents/Trauma	3,600	1.4
General	22,388	9.0

SOURCE: Indian Health Service, Public Health Nursing Report No. 3, Fiscal Year 1993

Chart 6.16

**Indian Health Service
Public Health
Nursing—Percent of PHN
Time by Type of Activity,
FY 1993**

51 percent of public health nursing time in FY 1993 was devoted to patient service in the home, while 24 percent was spent on patient service outside the home.

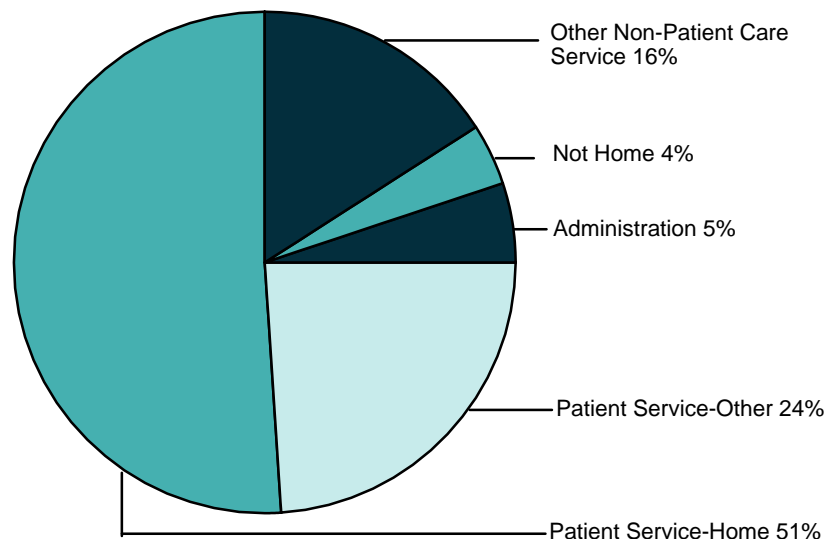


Table 6.16

**IHS Public Health
Nursing Time Worked by
Type of Activity, FY 1993**

Type of Activity	Number of Hours	Percent Distribution
Total Hours	227,186	100.0
Patient Service-Home	116,174	51.1
Patient Service-Other	53,710	23.6
Administration	10,204	4.5
Not Home	8,204	3.6
Register/Record Maintenance	7,689	3.4
Coordinating	4,450	2.0
Education Received	3,130	1.4
Client Classes	3,088	1.4
Program Management	2,779	1.2
Community Development	1,363	0.6
Education Provided	1,114	0.5
School	754	0.3
Technical Assistance Provided	721	0.3
Supervision Provided	604	0.3
Supervision Received	548	0.2
Discharge Planning/Hospital Rounds	469	0.2
Technical Assistance Received	93	0.0
Clinic	78	0.0
Interpreting	72	0.0
Other	11,942	5.3

NOTE: Percentages do not sum to 100.0 due to rounding. 0.0 represents rounds to zero.

SOURCE: Indian Health Service, Public Health Nursing Report No. 2, Fiscal Year 1993

Chart 6.17

**Indian Health Service
Public Health Nursing—
Patient Visits by Age and
Sex, FY 1993**

For the public health nursing program in FY 1993, female visits outnumbered male visits by nearly 70 percent. 7 percent of all visits pertained to males aged 65 and over. The corresponding percentage for female elderly was 13.

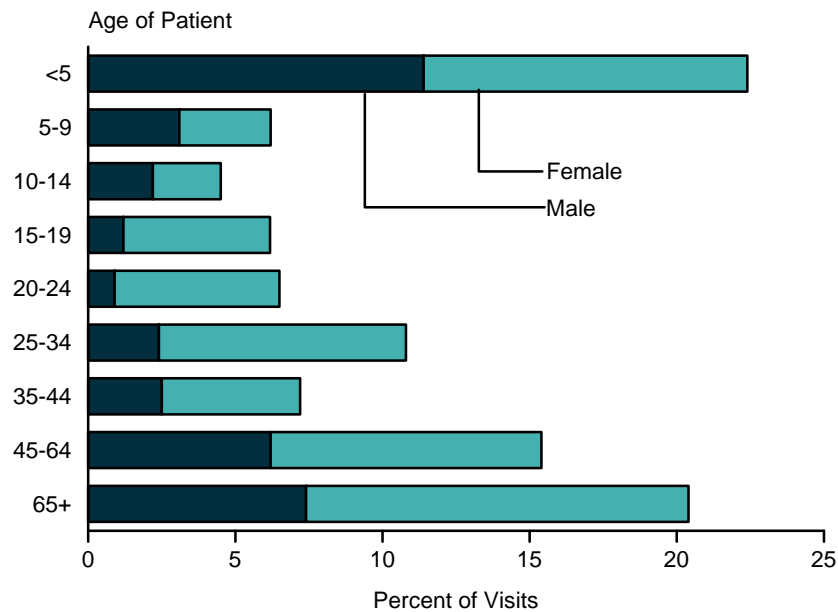


Table 6.17

**IHS Public Health
Nursing Visits by Age
and Sex of Patients,
FY 1993**

Age Group	Number of Visits		Percent Distribution		Ratio Female to Male
	Male	Female	Male	Female	
All Ages	92,369	154,877	37.4	62.6	1.7
Under 5 years	28,283	27,183	11.4	11.0	1.0
5 to 9 years	7,760	7,597	3.1	3.1	1.0
10 to 14 years	5,428	5,741	2.2	2.3	1.1
15 to 19 years	2,844	12,137	1.2	4.9	4.3
20 to 24 years	2,140	13,838	0.9	5.6	6.5
25 to 34 years	5,811	20,765	2.4	8.4	3.6
35 to 44 years	6,167	11,622	2.5	4.7	1.9
45 to 64 years	15,242	22,821	6.2	9.2	1.5
65 years +	18,282	32,158	7.4	13.0	1.8
Unspecified Age	412	1,015	0.2	0.4	2.5

NOTE: Excludes 2,725 visits with gender not reported.

SOURCE: Indian Health Service, Public Health Nursing Report No. 19, Fiscal Year 1993

Chart 6.18

**Indian Health Service
Public Health Nursing
Visits by Age, FY 1993
Versus 1990 Census**

22 percent of public health nursing visits in FY 1993 pertained to children under 5 years of age and 20 percent pertained to adults over the age of 64. Based on the 1990 Census, these 2 age groups comprised much smaller proportions of the Indian population—12 percent and 6 percent, respectively.

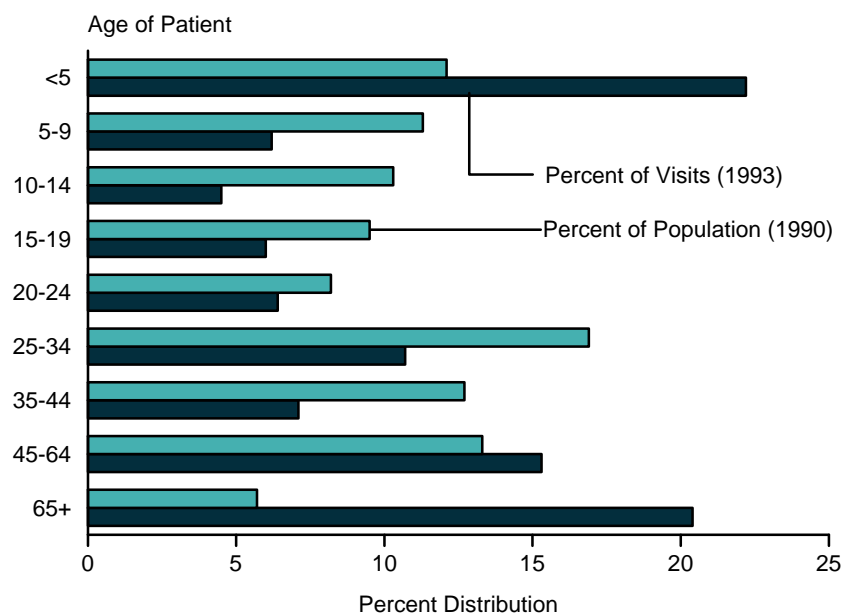


Table 6.18

**IHS Public Health
Nursing Visits by Age of
Patients**

FY 1993 Visits Compared
with 1990 Census Data

Age Group	PHN Visits		1990 Census Percent Distribution ¹	Ratio PHN Visit Distribution to 1990 Census
	Number	Percent Distribution		
All Ages	249,971	100.0	100.0	
Under 5 years	55,567	22.2	12.1	1.8
5 to 9 years	15,380	6.2	11.3	0.5
10 to 14 years	11,185	4.5	10.3	0.4
15 to 19 years	15,025	6.0	9.5	0.6
20 to 24 years	16,056	6.4	8.2	0.8
25 to 34 years	26,654	10.7	16.9	0.6
35 to 44 years	17,831	7.1	12.7	0.6
45 to 64 years	38,162	15.3	13.3	1.2
65 years+	50,890	20.4	5.7	3.6
Unspecified Age	3,221	1.3	.	.

¹ Based on data contained in the 1990 Census modified age, race, and sex file for American Indians and Alaska Natives residing in the IHS service area.

NOTE: PHN percentages do not sum to 100.0 due to rounding.

SOURCE: Indian Health Service Public Health Nursing Report, No. 14, Fiscal Year 1993

Chart 6.19

Distribution of CHR Client Contacts by Setting, FY 1993

The community health representatives (CHR) program made over 4.1 million client contacts in FY 1993. Most of these contacts took place in the community (41 percent), followed by home (26 percent).

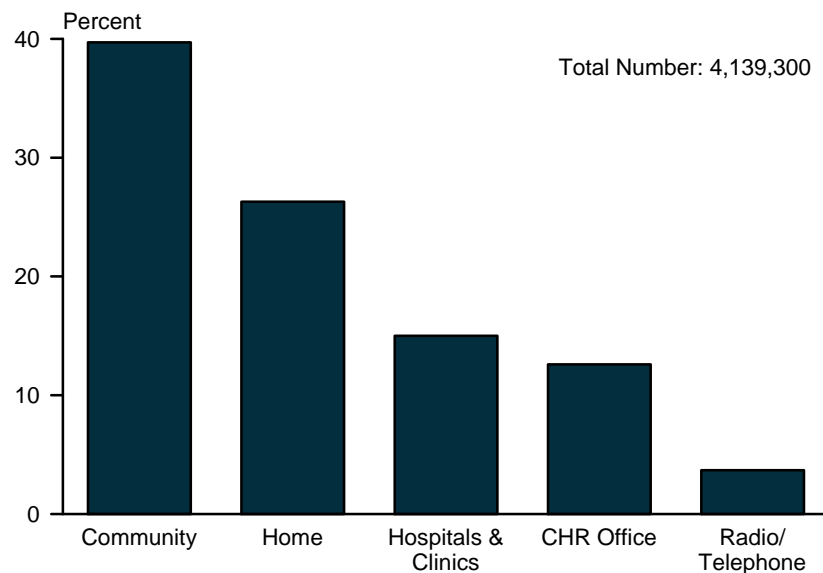


Table 6.19

Community Health Representative Client Contacts

By Setting, FY 1993

	Client Contacts ¹	
	Number	Percent Distribution
Total Client Contacts ¹	² 4,139,300	100.0
Community	1,693,733	40.9
Home	1,094,374	26.4
Hospitals and Clinics	659,220	15.4
CHR Office	522,448	12.6
Radio/telephone	152,415	3.7

¹ Estimated data based on CHR client contact reports completed during 12 sample reporting weeks during October 1, 1992 to September 30, 1993 and inflated to represent all weeks during Fiscal Year 1993.

² Total includes 37,110 client contacts (0.9 percent of total contacts) with setting not reported.

Chart 6.20

**CHR Client Contacts—
Trend in Leading
Detailed Activities,
FY 1990–1993**

The two leading detailed activities for CHR contacts in FY 1993 were health education (23 percent) and case management (17 percent). In FY 1990, the top two were patient and medical supplies transportation (18 percent) and health education (12 percent).

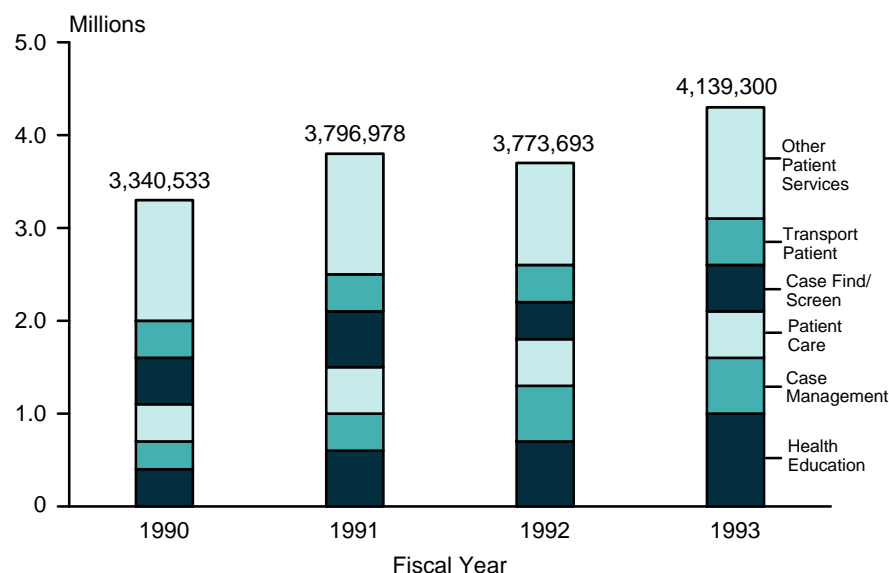


Table 6.20

**Community Health
Representative Client
Contacts**

For Leading Detailed
Activities, FY 1990–1993

Detailed Activity	1990	1991	1992	1993
Total Client Contacts ¹	3,340,533	3,796,978	² 3,773,693	² 4,139,300
Percent Distribution				
Total Client Contacts ³	100.0	100.0	100.0	100.0
Health Education	11.6	14.9	18.7	23.4
Case Management	7.8	9.7	16.4	17.0
Provide Patient Care	11.3	10.3	11.0	11.5
Case Finding and Screening	11.3	12.4	14.3	11.2
Transport Patient	³ 18.0	³ 16.2	12.2	10.5
Monitor Patient	10.2	9.9	9.7	8.9
Provide Environmental Services	7.3	8.5	5.7	5.4
Provide Homemaker Services	1.2	1.2	2.2	2.6
Interpret/Translate for Patient	1.2	2.6	1.1	1.2
Provide Emergency Care	0.4	0.5	0.6	0.5
Provide Other Patient Services	⁴ 19.8	⁴ 13.8	8.1	7.8

¹ Estimated data based on CHR client contact reports completed during 12 sample reporting weeks between October 1, 1992 and September 30, 1993 and inflated to represent all weeks during each fiscal year.

² Total includes activity unspecified, not shown separately. Percent distribution based on number of client contacts with activity specified.

³ Includes the delivery of medical supplies to patients in 1990 and 1991.

⁴ Includes the provision of patient clerical services, in 1990 and 1991.

Chart 6.21

**Leading Health Problems
for CHR Client Contacts,
FY 1993**

The two leading health problems for CHR contacts in FY 1993 were health promotion/disease prevention (21 percent) and diabetes (13 percent).

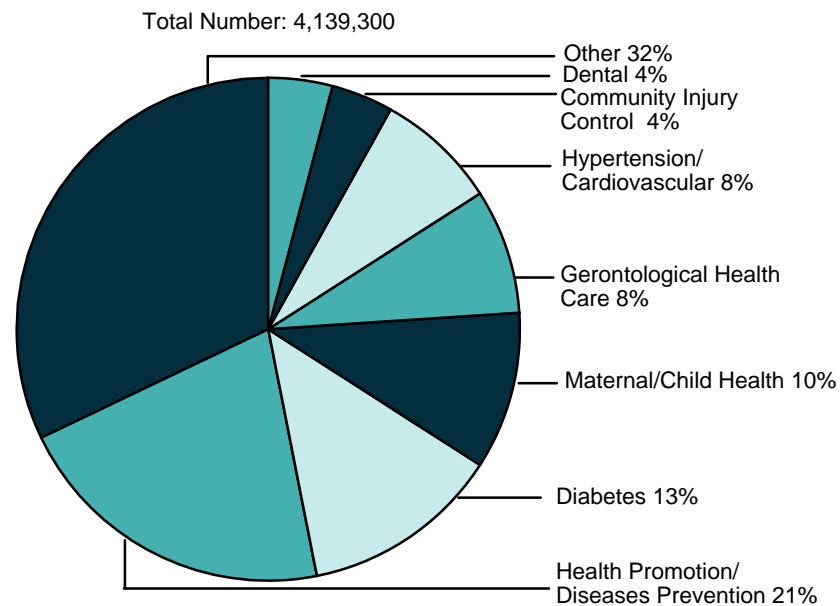


Table 6.21

**Community Health
Representative Client
Contacts**

For Leading Health
Problems, FY 1993

Health Problem	Number	Percent Distribution
Total Client Contacts ¹	² 4,139,300	100.0
Health Promotion/Disease Prevention	850,241	20.5
Diabetes	553,192	13.4
Maternal/Child Health	423,596	10.2
Gerontological Health Care	346,275	8.4
Hypertension/Cardiovascular Disease	321,197	7.8
Community Injury Control	145,923	3.5
Dental	143,901	3.5
Communicable Disease	122,042	2.9
Alcohol/Substance Abuse	93,723	2.3
Cancer	62,227	1.5
Mental Health	47,282	1.1
AIDS	45,622	1.1
Other General Medical	770,053	18.6

¹ Estimated data based on CHR client contact reports completed during 12 sample reporting weeks between October 1, 1992 and September 30, 1993 and inflated to represent all weeks during Fiscal Year 1993.

² Total includes 49,013 client contacts (1.2 percent) with health problem not specified.

Chart 6.22

Leading Types of CHR Incoming Client Referrals, FY 1993

The CHR program received nearly 1.3 million referrals in FY 1993. Family/self/community referrals comprised 39 percent of the total, while 16 percent came from fellow CHRs.

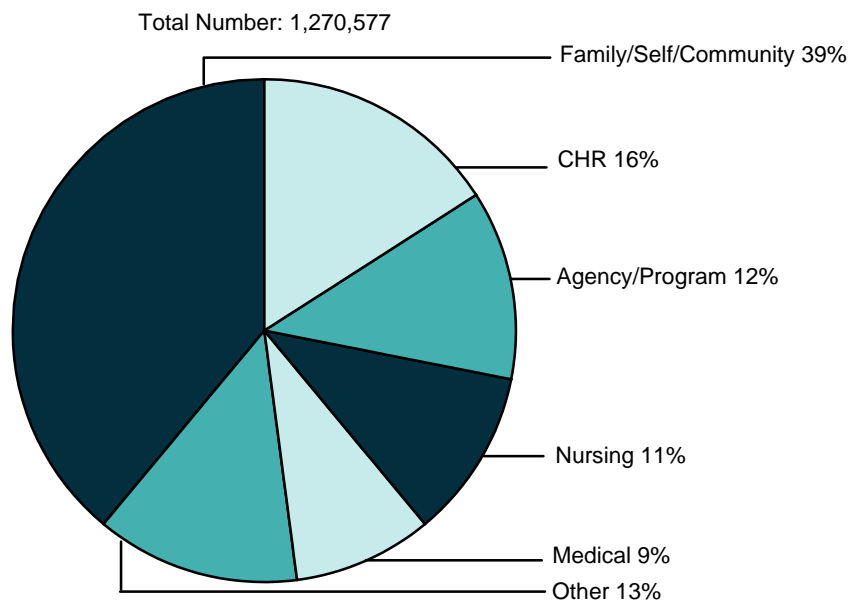


Chart 6.23

Leading Types of CHR Outgoing Client Referrals, FY 1993

The CHR program made over 900,000 referrals in FY 1993. CHR to CHR referrals made up 39 percent of outgoing CHR referrals, while family/self/community received 25 percent of these referrals, and medical professionals and agencies/programs each received 11 percent.

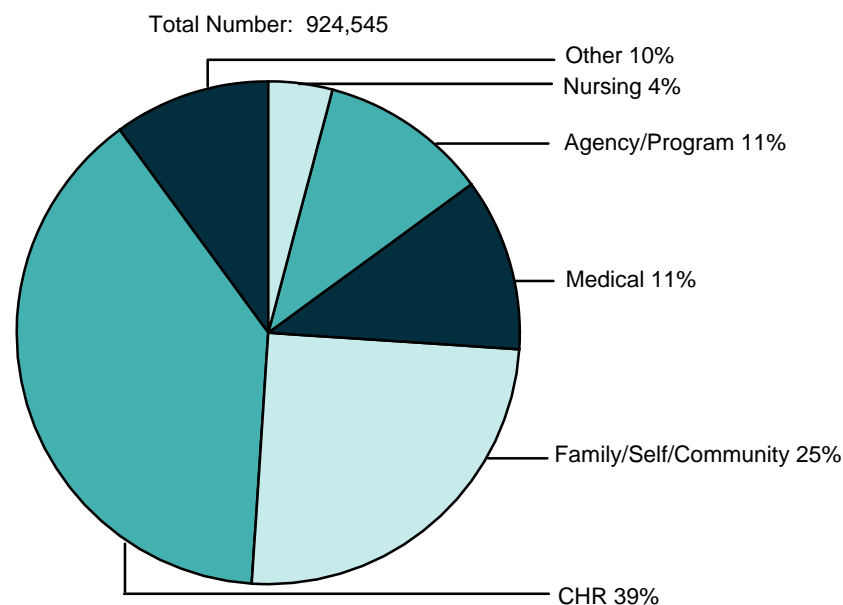


Chart 6.24

***Types of Indian Homes
with Sanitation Facilities
Funded by Indian Health
Service (1993)***

Since 1960, over 196,000 Indian homes were funded by Indian Health Service for the provision of sanitation facilities.

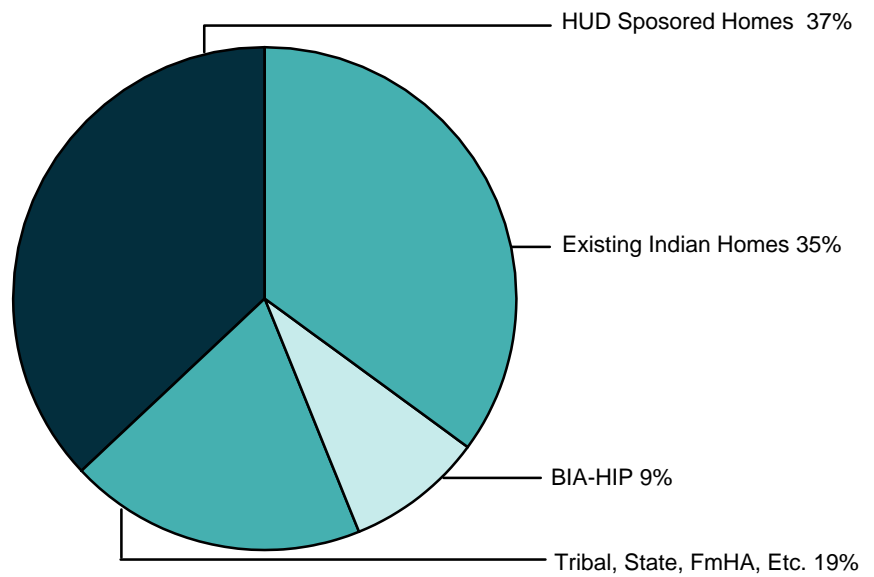


Table 6.24

***Indian Homes Funded to Receive Sanitation Facilities From IHS,
FY 1960–1993***

Fiscal Year	Total First Service	First Service and Upgrade	Existing First Service	HUD First Service	HIP First Service	Tribal and Other	Total Upgrade
Total	196,478	266,663	68,210	72,942	17,932	37,394	70,186
1993	8,246	11,559	1,759	2,074	426	3,987	3,313
1992	6,168	11,571	1,883	1,339	423	2,523	5,404
1991	7,626	12,119	1,818	2,062	902	2,846	4,493
1990	4,647	6,800	361	1,975	518	1,794	2,153
1989	7,235	10,208	1,754	1,844	649	2,989	2,973
1988	5,785	8,463	2,151	1,699	606	1,330	2,678
1987	5,064	6,111	157	3,035	372	1,501	1,047
1986	5,281	7,057	319	2,378	574	2,010	1,776
1985	4,424	8,386	129	2,101	574	1,621	3,962
1984	3,600	7,479	101	1,332	660	1,507	3,879
1983	4,846	9,440	1,804	1,072	1,174	796	4,594
1982	8,311	9,820	782	5,725	504	1,301	1,509
1981	6,193	9,112	668	3,897	501	1,127	2,919
1980	6,420	9,231	596	4,188	607	1,029	2,812
1979	6,816	8,295	1,166	3,758	655	1,237	1,479
1978	3,144	3,448	442	1,133	790	779	304
1977	14,155	21,639	5,840	4,999	1,408	1,909	7,484
1976	7,378	9,832	654	4,590	720	1,414	2,455
1975	5,910	8,381	1,520	2,419	851	1,121	2,471
1974	6,091	8,189	2,505	1,961	565	1,061	2,099
1973	7,599	9,166	2,626	3,349	1,066	560	1,567
1972	8,719	10,988	2,380	4,848	701	790	2,269
1971	5,101	6,847	863	2,961	726	551	1,746
1970	6,753	7,701	1,978	3,840	617	318	949
1969	6,294	7,087	3,974	1,416	445	459	793
1968	4,905	5,130	3,563	747	455	141	225
1967	4,032	5,130	3,042	696	114	181	1,098
1966	4,134	4,399	2,580	953	101	500	266
1965	4,036	4,689	3,625	340	71	0	653
1964	6,056	6,371	5,750	164	142	0	316
1963	5,450	5,916	5,420	0	20	10	466
1962	3,408	3,413	3,357	51	0	0	5
1961	2,600	2,636	2,590	0	0	10	36
1960	60	60	60	0	0	0	0

NOTE: Data for the later years represent estimates of services to be provided.

Chart 6.25

Contributions to Indian Health Service Sanitation Facilities Projects (1993)

Contributions to Indian Health Service sanitation facilities projects are received from numerous sources. In FY 1993, Tribes were the largest contributors to these cooperative projects.

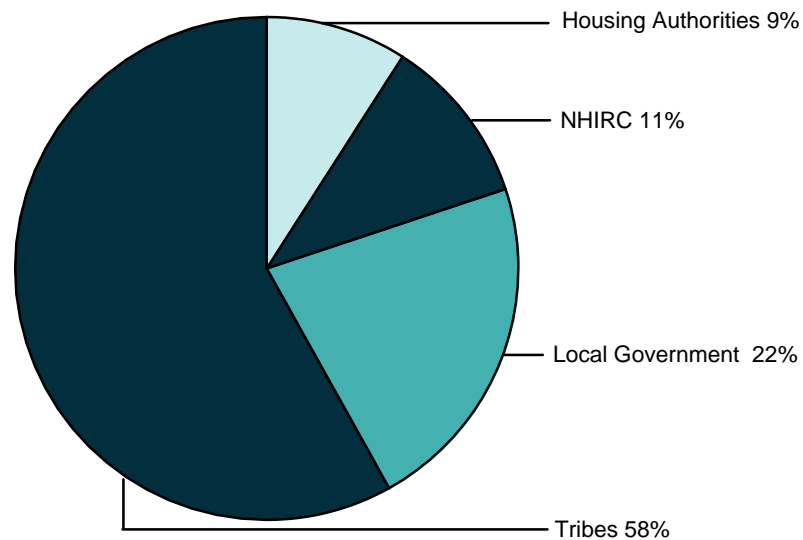


Table 6.25

P.L. 86-121 Program

Summary of Cash Contributions Received in FY 1993 by Contributor

Contributor	Contributions	Percent
Total	\$18,330,384	100.0
Tribes ¹	10,674,172	58.2
Local Government	3,971,578	21.7
Navajo-Hopi Indian Relocation Commission (NHIRC)	2,085,280	11.4
Housing Authorities	1,545,354	8.4
Nonprofit Organizations	39,000	0.2
Businesses	0	.
Individuals	0	.
State Government	15,000	0.1

¹ Includes EPA and DHUD Community Development Block Grant funds that were contributed by Tribes.

Chart 6.26

**Sanitation Facilities
Deficiencies FY 1994—Costs**

The FY 1994 sanitation facility deficiency of \$609 million to serve existing American Indian and Alaska Native homes and communities represents the cost to provide first service sanitation facilities, to upgrade existing facilities, to provide solid waste facilities, and to provide assistance to operation and maintenance organizations.

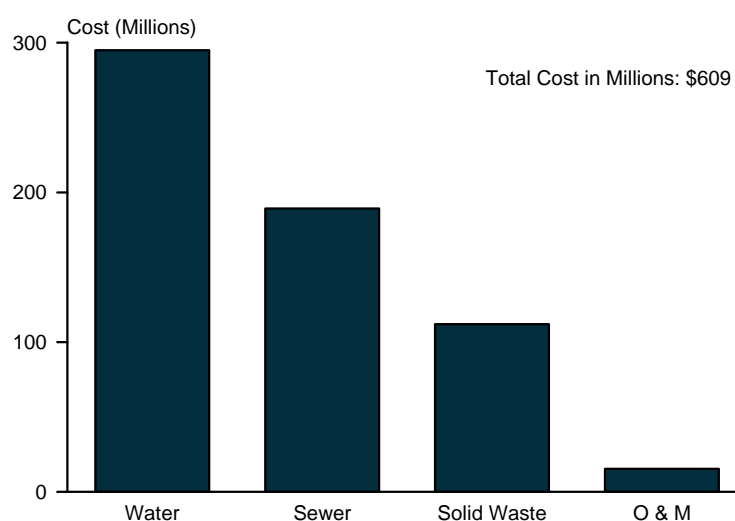


Chart 6.27

**Sanitation Facilities
Deficiencies FY 1994—Units**

The sanitation facility deficiency for American Indian and Alaska Native homes and communities is categorized into requirements for water, sewer, assistance to establish and equip organizations to operate and maintain the facilities, and solid waste disposal systems. Units are the total number of homes.

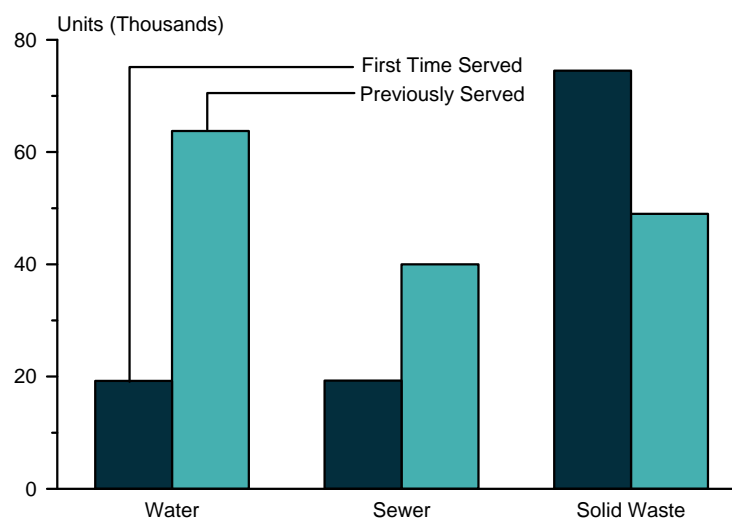


Table 6.26

Sanitation Facilities

Deficiency Summary (FY 1994)

Total Deficiency, \$608,501,064 ¹

	Water		Sewer		Solid Waste		Operation and Maintenance	
	Units	Cost (thousands)	Units	Cost (thousands)	Units	Cost (thousands)	Units	Cost (thousands)
Total	85,323	\$297,445	60,153	\$185,414	122,974	\$117,903	47,348	\$7,739
1st Service	20,531		19,708		74,958			
Previous Service	64,792		40,445		48,016			

¹ Cost estimates are for projects in current IHS funding plan. Additional projects totaling approximately \$1,003 million, mostly for the provision of piped water and sewer to 2.5 percent of existing American Indian and Alaska Native homes and communities, are not considered economically feasible at this time.

